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DERMATOLOGY AS A SPECIALTY, AND ITS RELATION TO INTERNAL MEDICINE*

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It seems appropriate that my address, as chairman of the Section on Dermatology of the American Medical Association, should be devoted not so much to the refinements of a specialty as to the general and fundamental relations of this specialty to medicine as a whole.

One by one the individual branches of medicine have been cut off the main trunk and cultivated exclusively by specialists. This process of the division of labor was inevitable and indispensable for advance through concentration of effort. But, as in all restricted effort, the very concentration tended to narrowness of observation and loss of perspective that impaired the broadest utilization of the observations made, both for the specialist and for the generalist. The specialist became too much a specialist and lost a capacity for the correlation of the minutiæ of his observations into generalizations. The generalist—and I mean by the generalist the scientific internist as well as the general practitioner—on the other hand, was separated more and more in his understanding and interest by the complexity of the specialty. He not only could not follow the complications and intricacies of the specialties but he had little interest in them, in so far as they remained separated by failure to correlate them with their general causes.

These considerations apply with exceptional force to the specialty of dermatology, which alone concerns us at present. Dermatology has become so complicated with fine distinctions of terminology and classification that its underlying principles and fundamental relations have been much obscured by the haze of details that has enveloped it.

Is it not proper, therefore, that we as dermatologists should make some effort to bridge the ever-widening separation between our specialty and the field of internal medicine? Should we not attempt to interest ourselves more in the newer generalizations of medicine and to bring the internists into closer touch with ourselves and our work? I believe that this is becoming essential to progress. The period of infancy in our specialty is passing. This period has been devoted to the collection of simple observations and facts. This collection cannot be claimed to be completed and must be still further extended. But already the unrelated facts observed and brought together in the domain of dermatology are becoming cumbersome and an impediment to progress. Correlation of these facts must be attempted if confusion is to be avoided. General causes must be sought and discovered. We as specialists alone cannot undertake this difficult task. We must unite with the internists and together work in the clinic and the laboratory in the investigation of broad relations and causes.

With the exception of parasitic and local inflammatory affections of the skin and with the further possible exception of certain skin affections of wholly unknown nature, it may be said that skin diseases are for the most part simply the superficial local manifestations or complications of general or special morbid states involving the tissues of the body either generally or specially in certain organs or groups of organs. In short, most skin diseases are nothing but symptoms or complications of constitutional or special morbid states. This statement may appear at first sight too sweeping a generalization and perhaps somewhat of a prophecy, but of its essential truth I have been convinced the more I have given consideration to it.

If I am correct in this view, then my plea for more systematic cooperation between the dermatologist and the generalist is clearly supported. Not only is this cooperation of study demanded for the highest ends of scientific medicine but also for the many incidental advantages to all concerned in it. What needless distress and even disaster ensue to the patient by reason of the ignorance of the general practitioner as to the interpretation of many skin lesions. We as dermatologists are constantly reminded of this fact. Can we claim that the reverse is not also true? How do we know that it is not? With all our little distinctions and refinements of classification of skin lesions do we know much of the internal relations and final causes of these lesions? Do we know that a skilled internist may not discover related manifestations in other parts of the body and suggest therapeutic measures of value equal to or even greater than our own? It is true that, thus far, the internist has added little or nothing to such correlation, because he has failed to realize its value.

But far more important is the determination of new facts, new relations, new conceptions, the simplification of complexity. All these will come in time. We can hasten their coming by stimulating the interest of our fellow internists and working with them.

As dermatologists we should not be summoned to the hospital clinics occasionally and separately to inspect or diagnose an unusual skin affection; we should consult with the internist, give and take, and together learn. Cooperation of study between ourselves and all the departments of scientific research in our hospitals and laboratories should be instituted and systematically prosecuted. How else can dermatology be correlated with scientific medicine?

It is surprising to note the crude notions still prevalent among the laity and even physicians regarding skin affections. How much harm and needless suffering

* Chairman's address before the Section on Dermatology of the American Medical Association at its Sixty-first Annual Session, held in St. Louis, June, 1910.

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result from these false views! How many innocent persons are cruelly subjected to unjust suspicions of moral guilt, due to ignorance of the real nature of their skin affections! How frequently do we still encounter such old superstitions as the effect of "catching cold" and of psychic influences in producing all manner of skin diseases!

The idea that skin lesions are manifestations of "impurities of the blood" and require "medicine for the blood" is too deep-rooted in the ignorance and prejudice derived from past teaching to be readily overcome. A natural variation of this view is seen in the notion very commonly held that some skin diseases should not be treated locally, lest they be "driven in." Other variations of the blood diathesis theory still widely held are the views that many skin affections are due to a scorbutic taint or to scrofula.

These are specimens of the theories formerly held by the medical profession and still deeply ingrained in the prejudices of the laity and in the ignorance of many practitioners. Other crude notions of a blood diathesis still persist within the profession, modified, however, to conform with newer conceptions of pathology but still running in the same old grooves. Thus the uric acid diathesis theory of skin affections is nothing but a modern setting of the older views. So long as nothing much was known about uric acid this theory satisfied and was dignified by a certain pseudoscientific assumption of exactness. This idea was handed on to the laity and is to-day one of the chief errors that we have to combat. With the passing of uric acid as a cause of every conceivable ill to which flesh and skin are heir, we shall presently, probably have other variations of the old dogma to contend with. That there may be an element of truth underlying these crude notions we may readily believe, for metabolism lies at the foundation of all vital processes and errors of metabolism may be presumed to account for many of the variations from normal in the different tissues and functions of the body. But in making this admission let us not again be led into the same old error of assuming to know the exact nature of such metabolic errors and of assigning to mere hypotheses the dignity of authority. This has been the trouble in the past and warns us of danger in the future. Let us keep in check our enthusiasm for new notions until we can see clearly. Let us contribute our part to the active research now being vigorously pursued in the study of faulty metabolism, but beware of crude generalizations based on incomplete data. Thus only shall we avoid falling victims to the temptation of easy conclusions based on shallow thinking.

But while striving for ideals in the scientific correlation of dermatology with internal medicine, the utilization of the practical knowledge already possessed should not be neglected. How much of practical importance can be contributed to-day by trained dermatologists to general practitioners? How slight is the understanding by most practitioners of the many lesions of the skin which they see! How often do these lesions give important clews to internal affections? The general practitioner must be far better trained in dermatology in order to comprehend and justly to estimate the relations of dermatology to general medicine. A much closer professional relation should exist between the dermatologist and the general practitioner for the good of both and of the patient.

In the short space of this address I cannot consider at length many of the numerous points of practical contact between dermatology and internal medicine, but I may refer briefly to some of them, chiefly for the sake of illustrating the shortcomings in practice resulting from a failure of intimate cooperation between dermatologists and generalists.

DISEASES ESPECIALLY CALLING FOR COOPERATION BETWEEN DERMATOLOGISTS AND INTERNISTS

Exudative Erythemas.—We have been accustomed to regard as belonging to the specialty of dermatology the several varieties of exudative skin lesions of the erythema group. Only within recent years has this whole complex group been correlated with important manifestations in the internal organs. An appreciation of this correlation is as essential to the dermatologist as to the internist and surgeon. Would it not be folly to treat the skin lesion and to overlook an acute nephritis, bronchitis, pericarditis, arthritis or abdominal complication? Are we, as dermatologists, accustomed to refer such cases for general examination? On the other hand, how rarely do the internist and the surgeon take account of the clew to diagnosis afforded by these lesions in cases presenting acute abdominal symptoms! Twice in a single week I have seen hospital patients barely saved from an unnecessary laparotomy by the timely intervention of physicians who fortunately did possess enough of broad training to embrace a knowledge of the correlation of such skin manifestations with acute abdominal symptoms and to advise against operation. Many instances of laparotomies actually performed for supposed appendicitis, intussusception, twists of the intestines, tumors and other abdominal conditions have been reported—and doubtless many more have not been reported—which could have been avoided by a knowledge of the correlation of such abdominal symptoms with exudative skin lesions of the erythema group. How long will this kind of one-sided specialism continue to the detriment of scientific practice?

Syphilis.—Of all diseases demanding the attention of dermatologists, specialists and generalists, syphilis is one of the most important, involving in its consequences not merely the health and life of individuals but the happiness of families and the welfare of society. This disease, which affects every tissue of the body and remains transmissible for years and perhaps through generations, first manifests itself by lesions in the skin and mucous membranes, for which the dermatologist is often first consulted. Later, the general practitioner is required to treat the disease for the involvement of internal organs, the neurologist for the late consequences on the nervous system, the surgeon for destructive changes in the bones and joints, and the other specialists in turn for the involvement of various organs. How important it is that this disease be understood in its broadest relations, its various manifestations mastered by all practitioners of whatever limitation in their field of work, and its proper treatment thoroughly comprehended! How far are we from this accomplishment! Dermatologists, by their unusual opportunities for observation of the skin manifestations of this disease, have acquired a skill in its diagnosis that is equalled by no other practitioner. Yet how frequently is our cooperation sought by our colleagues in their doubtful cases? In no other common disease is the penalty exacted for incorrect diagnosis and faulty treatment so severe.

Better education regarding the prevalence, manifestations, diagnosis and treatment of this disease is imperatively demanded. The general ignorance of the medical profession regarding syphilis is deplorable and a reproach that we should feel. A systematic campaign of

education in syphilis might well be undertaken by the official organ of our association. To this end I would recommend that our Section take appropriate action.

Leprosy.—This is a disease fortunately rare in this country and for this very reason one that is usually mistaken for other affections, notably for syphilis. Most of its manifestations, however, are found in the skin or external portions of the body, rendering its diagnosis easy for those skilled in lesions of the skin. The training of the dermatologist especially equips him for the differentiation of this disease from those conditions with which it might readily be confused.

Pellagra.—This disease, which is now attracting so much attention and which has until recently been entirely overlooked in this country, would be readily recognized by any competent dermatologist by reason of the characteristic pigmentation of the skin.

Diabetes.—To a dermatologist such symptoms as slight, recurring inflammation of the prepuce, itching of the skin, ulceration at the base of a nail and furunculosis would at least arouse a suspicion of diabetes; the occurrence of certain skin lesions, xanthoma diabeticorum, would be almost pathognomonic. In diabetes early diagnosis and treatment are certainly important.

Punctate Telangiectases.—These little lesions, while often of no moment, are not infrequently observed in connection with cardiac and hepatic disease and should never be passed over as of no significance without examination of the internal organs.

Eczema and Psoriasis.—While these common affections cannot usually be definitely associated with internal disturbances, not infrequently they can be, and their occurrence should always suggest a careful general examination. Their correct treatment very frequently demands the treatment of the underlying or associated conditions.

Parasitic Skin Diseases.—These wide-spread and annoying diseases of the skin are usually treated by the general practitioner, who has very frequently failed to do his full duty toward them, by reason of incorrect diagnosis, careless methods of treatment and still more careless methods of enforcing personal and public hygiene and quarantine. Errors in any of these points may lead to epidemics that could have been prevented by the institution of proper measures at the outset. These diseases should be among those required by law to be reported and controlled by the public health authorities through the enforcement of suitable quarantine.

Eruptive Fevers.—No class of diseases is of such importance for the public welfare as these. Once started they become epidemic and a veritable scourge to the community. Their correct and early diagnosis is, therefore, vital to the protection of the public health. While the diagnosis is often well made by the general practitioner, how frequently is this not the case? Lack of sufficient instruction on these diseases in the medical schools leaves the young graduate poorly equipped to diagnose them. How many medical students ever saw a case of smallpox? What wonder is it, therefore, that in actual practice smallpox is rarely diagnosed until it has already become epidemic and disseminated far and wide?

Both smallpox and scarlet fever are diseases that very frequently appear in individual cases in abortive or anomalous forms, calculated to deceive all but the elect. The general practitioner must be on guard against making fatal errors of diagnosis in such cases and would receive a genuine service from the counsel of an experienced dermatologist when in doubt in his diagnosis.

Drug Eruptions.—The recognition of drug eruptions is important both for their relief and especially for their correct differentiation from more serious conditions with which they are likely to be confused. Imperfect knowledge regarding these common conditions has often led to the gravest diagnostic and therapeutic errors. For example, the coal-tar preparations so widely used often produce eruptions of most varied form and extent in the skin and mucous membranes. Such eruptions have frequently been mistaken for syphilis, lichen ruber, pemphigus, scarlet fever, measles, etc., and in consequence the patient has been subjected to the most unnecessary treatment and restrictions. The correct diagnosis in many such instances has been suggested only by the subsequent repeated occurrence of similar outbreaks of the skin whenever the particular drug has been taken. Every physician should be familiar with the possible cutaneous effects of the drugs which he prescribes, and this knowledge can be acquired only by a large experience and exact observation. These eruptions are as a rule well known to dermatologists and should offer little difficulty of diagnosis.

The relationship of the functions of the skin to those of internal organs are beginning to be fairly well comprehended, although many of the most important bearings are still poorly understood. The connection of cutaneous diseases with inflammation of the mucous membranes in some cases is of unusual interest. It is not uncommon for a patient to seek out a physician, bringing the information, during an acute attack of his eczema, that an asthma from which he has suffered shows amelioration, and *vice versa*.

There is another class of cases of skin involvement in which the underlying causes are vasomotor in origin, without recognizable heart lesions, although, in certain instances, the symptom of tachycardia may be present. These circulatory disturbances may be accompanied by a great variety of skin manifestations whose relations to them are as yet but poorly understood.

This list could be extended almost indefinitely, but my purpose will have been effected if the few illustrative conditions cited shall have helped a little to indicate some of the points of contact between dermatology and general medicine and to encourage a closer cooperation of study and effort among all. Our fields of work must remain more or less differentiated, yet should be united more and more by bonds of allegiance and common purpose in the pursuit of ideals in the science and art of medicine.

In the furtherance of these ideals more intimate relations should be cultivated among the special Sections in the meetings of the American Medical Association, so that each Section may have a greater educative influence on the whole body. With this end in view the program of our Section ought to be arranged to include subjects of general interest, that will instruct all. It is hoped that the slight attempt in that direction this year may be an inspiration for greater future endeavor.

It is gratifying to me to be the first to welcome this Section under its new designation of the Section on Dermatology. I am sensible of the great honor you have conferred in choosing me as your chairman, and desire to express to you my dutiful thanks and to assure you of my liveliest appreciation. I also wish to acknowledge my indebtedness to our Secretary for his proverbial zeal and energy in connection with the interests of the Section.

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PEMPHIGUS FOLIACEUS

WITH REPORT OF A CASE*

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Pemphigus is a skin disease characterized by the eruption of blebs. These are, however, not characteristic in themselves but only in connection with other important features. The whole subject is not sufficiently cleared up yet and there is no unanimity as to what to include and what to exclude. Dermatitis herpetiformis is still considered pemphigus in Germany. Various skin diseases are denominated pemphigus, such as pemphigus neonatorum, which most probably is a bullous form of

Pemphigus foliaceus.

impetigo contagiosa, pemphigus syphiliticus, a manifestation of syphilis, pemphigus neuroticus and hystericus, sequels of functional and organic nerve disorders. A strict avoidance of these names would clear the ground rapidly. Bullæ are seen in bullous dermatitis, bullous erythema, and bullous urticaria, but nobody thinks of including these in pemphigus. Whether there is an acute pemphigus is a matter of controversy and denied by many.

* Read in the Section on Dermatology of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

What then does constitute real pemphigus? In the first place the characteristic feature is the bleb, which must be elementary, that is must begin as such and not be due to secondary changes of other skin lesions. It must be the essential and not an incidental or unusual feature of the disease. It must not be a local condition, but the manifestation of a grave internal disorder. Its course is chronic, with exacerbations and remissions, leading to a deep systemic depression and frequently to death. With such restrictions it may easily be seen that many cases of pemphigus reported must be excluded from consideration under this head and that pemphigus as an idiopathic disease (called so in the absence of a better knowledge of its nature) is a rare disease.

Of the etiology of pemphigus nothing is known. Against a microbic theory speaks the fact that the contents of fresh bullæ are sterile; that there is no clinical evidence of its contagiousness; that not more than one case in one family has been reported. A toxic process was considered from the analogy of the action of certain poisons and drugs which, when introduced into the system, were followed by the eruption of blebs. The occasional increased percentage of eosinophils was used for this argument. Many attribute pemphigus to a neuropathic cause, arguing that some functional and organic nerve disturbances manifest themselves by the appearance of blebs. Numerous examinations of peripheral and central nerve tissues in autopsies have shown no pathological changes in them. Age, sex, race and climate have no predisposing influence. Riecke says very tersely, that our total ignorance of the etiology of pemphigus serves as a valuable diagnostic point in its differentiation from other bullous diseases.

Of the three varieties, pemphigus vulgaris, foliaceus and vegetans, the last two are the rarest. Pemphigus foliaceus, of which I wish to report a case, is clinically so different from pemphigus vulgaris that it might be considered a separate disease, were it not for the fact that they sometimes lapse into each other. Pemphigus foliaceus occurs only once in 5,000 skin diseases and Croker has only seen six cases in a life-time of extensive dermatologic practice. Pemphigus foliaceus is a chronic disease which breaks out in successive crops, until it finally involves the whole surface. The cutaneous lesions are flaccid bullæ containing only sufficient fluid to bag their dependent parts. The contents are cloudy almost from the first and soon become purulent. The blebs rupture quickly and the epidermis exfoliates in shreds leaving the corium denuded and moist. The raw patches are covered with a foul-smelling sero-pus and have no tendency to dry up and to be covered with a healthy epidermis. The exudation undermines the neighboring skin, giving it a shriveled appearance and looks, as Cazenave says, like a flaky pie-crust. When the disease is fully developed, the body is covered with raw areas of various size, shreds of epidermis and loosened skin.

The mucous membranes may take part in the process, a complication considered especially unfavorable. The general health may not suffer at first, but the patient becomes ultimately cachectic or dies from an intercurrent disease. The end is almost always fatal, though sometimes not until after a few years.

The pathology of pemphigus has been thoroughly studied. The location of the bleb may be interepithelial or between the epidermis and the corium. The epithelial cells are edematous and swollen. The interspinous spaces are occluded. The corium is the seat of a mild probably secondary, inflammation. The papillary blood-

vessels are dilated and surrounded by small mononuclear leucocytes. An excess of eosinophils is found occasionally in the blood and the serum and was for a time considered distinctive, but no special significance can be attributed to it. In autopsies of bodies of persons dead from pemphigus, only coincidental changes were found, but nothing directly pertaining to the disease.

REPORT OF CASE

On March 15, this year, I first saw F. A. S., a farmer, 36 years old. Father died at the age of 60 of pneumonia, mother at 59 of typhoid. Seven brothers and one sister are living and in good health. There is no knowledge of a similar disease in the family. The patient has always been in good health outside of the usual children's diseases. His present trouble began in September, 1909, as small clear vesicles in the mouth, which increased in size and spread to the throat. Two weeks later they appeared in different places over the entire body. At first they remained unbroken and dried up, leaving behind considerable pigmentation which can still be seen. The disease was at that time probably pemphigus vulgaris. Lately the character of the bullæ has changed; they do not last long enough to become filled and tense, are only partially filled and flaccid and rupture rapidly. Large raw patches are produced in this way, partly covered with a sticky serum, partly with shreds of the exfoliated epidermis. The whole body is affected with the exception of the face, especially the lower third of the legs and the buttocks. Between the excoriated areas the skin shows plainly the separation of the horny layer from the subjacent layers by the above-mentioned shriveled finely wrinkled appearance. An exceptional feature, which I find observed only by Weidenfeld[1] was also seen in this patient. A slight rubbing of the skin or a mild trauma, like the taking of a drop of blood from the ear-lobe, was invariably followed by a large bleb. This is probably not so much due to an unstable condition of the vasomotor system of the skin, as in epidermolysis bullosa, as rather to the unstable adhesion of the individual layers of the epidermis. The mucous membranes were affected from the first. The tongue, gums, cheeks and the pharynx are involved presenting sharply outlined raw patches, partly bleeding, partly covered with a loosened grayish membrane. The eruption was at first accompanied by itching which has subsided lately and only general discomfort is complained of. Chewing and swallowing is at times extremely painful and almost impossible. The general health has not suffered much up to the present time, except for an occasional rise of the temperature and an anemic appearance. The patient has, however, lost 70 pounds in his weight since the beginning of his trouble. The urine is acid, specific gravity 1011; no albumin or sugar is present. Blood examination is as follows: Red cells, 4,232,000; white cells, 6,600; hemoglobin, 82 per cent. Differential count: Small mononuclears 40, 20 per cent.; large mononuclears, none; transitional forms 28, 14 per cent.; polymorphonuclears 128, 64 per cent.; eosinophils 4, 2 per cent. As can be seen from this, there is no considerable change from the normal except a decrease of hemoglobin. The percentage of eosinophils is not increased.

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ABSTRACT OF DISCUSSION

DR. M. MCMAHON, Palmyra, Ill.: I have under observation a case of pemphigus, in an anemic woman, 55 years old, who has worked hard all her life and is broken down in health. The first lesions appeared about six months ago on the buccal mucous membrane, and finally covered the entire buccal mucous membrane, including the gums. After a time, the patient's condition improved to such an extent that she could take food, which she was unable to do at first. Early in March, the first external manifestations of the disease appeared on the face. Other regions of the body then became involved, many blebs forming and breaking down, leaving large areas of denuded skin. Then for a time the patient would improve, only to go through the entire process again with a fresh crop of lesions. Another physician saw the case with me, and confirmed the diagnosis. At the present time, the external manifestations of the disease have somewhat improved, but all the mucous membranes, including the throat, stomach and intestines are now undergoing the same process. The urine, which has been repeatedly examined, contains neither sugar nor albumin, but does contain a large amount of indican. The patient has had all sorts of treatment, arsenic, salicin and quinin being the principal internal remedies, although she had an idiosyncrasy against the latter drug. She appears to be improving at present, but on account of the condition of the mucous membranes, she cannot take a great amount of nourishment. This is the only case that I have seen in the section of Illinois in which I live. I recall a case in the City Hospital about twenty-eight years ago in which the patient was kept in a continuous bath for about six months and finally died.

DR. H. H. HAZEN, Washington, D. C.: I reported a case of pemphigus foliaceus in the *Journal of Cutaneous Diseases*, March, 1910. The patient was a man, 30 years old, who first came under my observation in 1907, and who was referred to me for study by Dr. Thomas C. Gilchrist of the Johns Hopkins Hospital. In going over the metabolism of this case, we found the ammonia output tremendously high. Normally, the ammonia is but 3.5 per cent. to 5 per cent. of the total urinary nitrogen, but in our case the ammonia constituted 15 per cent. of the total urinary nitrogen. This spoke in favor of intestinal infection. The patient was treated with autogenous vaccines in doses ranging from 10,000,000 to 100,000,000. After the first injection he became ill, with marked malaise and headache, pain in the back and limbs, redness and swelling at the site of the inoculation, and an outbreak of a fresh group of vesicles. The reaction was similar to the typical tuberculin reaction. As each injection caused more blisters and malaise, the treatment was stopped. In view of Crowe's work, large doses of hexamethylenamin were given, but without effect. The patient was placed in a continuous bath during the day; at night he slept in bed. After a few days it was noted that the scales had decreased in number, but there was a large number of fresh vesicles which were moist and flaccid. The patient's general condition, however, had improved. He did better under this treatment than any other.

I think that there is need of more thorough investigation of the entire group of pemphigoid eruptions along the lines of modern research. It is not sufficient merely to employ observation. Studies should be made on the following subjects: (1) general metabolism; (2) toxicity of the perspiration; (3) bacteriologic examinations of the blood, bullæ, urine and feces; (4) agglutinating power of the blood.

DR. E. S. LAIN, Oklahoma City: Has any one experimented with the *x*-ray in these cases? I have had the opportunity of making such a test in two cases during the past twelve months, and under this treatment it has seemed to me that the exacerbations terminate much more rapidly than by any other method that I have tried. In my first case, the lesions ceased to form after the eleventh exposure to the rays. Since then the patient has not been directly under my care, but the lesions have been so few in number that her attending physician did not think it necessary to bring her to the hospital for further treatment. Of course, I do not regard the patient as cured.

In another case, which I saw a month later, the blebs ceased forming after eight exposures to the *x*-rays. Four weeks later there was a recurrence, but thus far the patient has failed to return to the hospital for further treatment. I have a photograph of this patient which I will show to-morrow at the photographic exhibit.

DR. A. SCHALEK, Omaha, Neb.: Dr. Hazen's remark that cases of pemphigus foliaceus have not been studied in a sufficiently thorough manner is not quite justified. The disease is so rare and interesting, especially on account of its serious consequences, that any one who ever had a case generally took the time to study it. In spite of that fact, we do not know much more about the etiology of the disease than we did

1. Cited by E. Spiegler: Mraczek's Handbuch der Hautkrankheiten, II, 2.

before. I have watched my cases carefully, and I have had blood examinations and cultures made.

In my paper, I did not say much about the treatment of pemphigus foliaceus. So far as I know, there is no satisfactory treatment; the patients all die, some sooner, some later. I put my patients in a warm bath for several hours every day, and then have them wrapped in moistened sheets.

EXPERIENCES WITH THE DUODENAL CONTENTS*

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The examinations of stomach contents, which were inaugurated forty years ago by Kussmaul and later by Ewald, Leube, Boas, Riegel and others, have now been generally introduced into the clinical investigation of digestive disturbances.

The rôle which the stomach and its secretion play in the digestive process has formerly been estimated a great deal higher than at present. At first it was determined that human beings could exist very comfortably without any gastric juice at all (as proved by the numerous cases of achylia gastrica); then it was proven by the surgeons (Schlatter) that the stomach could be excised *in toto* without fatal consequences.

By physiologists as well as by clinicians the principal work of the stomach is now considered to be rather a preparatory process for the real digestion in the small intestine. The principal juices for the latter are contained in the duodenum. The potent pancreatic juice, the bile and the duodenal secretion are here poured out. The mixed juices have to fulfill two purposes, first, to make all nutritive materials ready for absorption and second to neutralize the strongly acid gastric contents; for the intestinal wall cannot, as a rule, stand free acids for any length of time.

It is, therefore, self-evident that any information as to the condition of the duodenal secretions would be of vast importance. Until recently this was considered hardly possible. Since I introduced the duodenal pump [1] however, the duodenal contents can readily be obtained, and I have therefore, made some investigations on its properties in a number of cases.

The method consisted generally in having patient drink in the fasting condition tea with sugar, without milk and then about half to three-quarters of an hour later introducing the duodenal pump, the patient meanwhile drinking a half tumblerful of water. Later, after one-half to one hour, the patient drinks a glassful of seltzer or hot water or tea and the examination then takes place. Whereas formerly I obtained the duodenal contents through continuous aspiration I now proceed differently, making suction first by means of a syringe and as soon as the contents are obtained removing the piston of the syringe and keeping the barrel of the syringe low. The fluid is thus siphoned out in a slow stream.

I have laid down the results of these examinations in the accompanying table.

Fig. 1.—Patient T., with the duodenal pump in the small intestine previous to the ingestion of bismuth.

Fig. 2.—Patient T., with the duodenal pump in the small intestine, after the ingestion of bismuth. The contours of the stomach are visible. The tube of the duodenal pump is seen outside of the stomach in the duodenum and small intestine.

COMMENT ON TABLE

If we analyze all the cases of the table we first meet six cases of nervous dyspepsia (1-6) in which trypsin was absent once in the duodenal juice.

In case 8 (chronic gastritis and nervous vomiting) the duodenal contents were thick and turbid, which might point to a duodenal catarrh. In Case 11 (T), with atony of the stomach, steapsin was absent in three examinations and once in examining the duodenal contents in the fasting and dry state (11 E.) all the ferments were found to be absent. In the same patient (11 F.) thick mucus was found once in the duodenal contents after an attack of ptomain poisoning. I append the *x*-ray pictures taken of this patient with the duodenal pump *in situ* (Fig. 1-2).

* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

1. Einhorn, Max: A Practical Method of Obtaining the Duodenal Contents in Man, Med. Rec., Jan. 15, 1910.

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TABLE OF EXAMINATIONS OF DUODENAL CONTENTS MADE FROM NOV. 1, 1909 TO APRIL 17, 1910

No.	Name.	Diagnosis.	Date of Examination.	In What Condition Examination is Made.	Amount in c.c.	Appearance.	Reaction.	Specific Gravity.	Steapsin.	Amylopsin.	Trypsin.	Remarks.
1a.	Mrs. K.	Nervous Regurgitation.	11- 6-09	After Milk.	1.5	Golden Yellow.	Alkaline.	.....	..	..	..	
1b.	Mrs. K.	Nervous Regurgitation.	11-10-09	After Milk.	..	Yellowish.	Alkaline.	....	+	..	+	
1c.	Mrs. K.	Nervous Regurgitation.	1-30-10	After Tea and Sugar.	8	Golden Yellow.	Alkaline.	....	+	+	+	Egg albumin, one-half present.
2	Mrs. M. S.	Enteroptosis	11- 7-09	After Milk.	..	Yellowish.	Slightly Acid.	....	+	..	O	
3	S. E.	Gastralgia Nerv.	11- 2-09	After Breakfast.	..	.....	Neutral.	.....	..	..	..	
4	A. Z.	Dyspepsia Nerv.	3-11-09	After Tea and Sugar.	..	.....	Slightly Alkaline	....	+	..	+	
5	Mrs. R. A.	Dyspepsia Nervosa.	2- 2-10	After Tea and Sugar.	30	Golden Yellow.	Alkaline.	1004	+	+	+	Egg albumin, one-third present.
6	B.	Dyspepsia Nervosa and Atony of the Stomach.	4-17-10	After Tea and Sugar.	5	Amber.	Alkaline.	....	+	+	+	Egg albumin, one-half present.
7a.	E. H. C.	Hyperchlorhydria.	11- 3-09	After Milk.	12	Yellowish.	Alkaline.	1007	+	..	Trace	Thymus nuclei have entirely disappeared. For comparison thymus is left for 22 hours in gastric filtrate of Pat. K. (Acidity 50). Nuclei have mostly disappeared.
7b.	E. H. C.	Hyperchlorhydria.	2-13-10	After Tea and Sugar.	10	Golden Yellow.	Alkaline.	1007	+	+	+	Egg albumin, one fourth present.
8	Miss H.	Chronic Gastritis, and Nervous Vomiting.	12-22-09	After Tea and Sugar.	15	Greenish Yellow.	Alkaline.	1010	..	..	..	Fluid is thick and turbid.
9	S. H. K.	Gast. Chron.	12-28-09	After Tea and Sugar.	20	Yellowish.	Alkaline.	....	+	+	Slight	
10	K.	Hyperchlorhydria.	1- 9-10	After Milk, Tea, Bread and Port Wine.	8	Golden Yellow.	Slightly Acid.	1005	+	+	+	Albumin, one-third present.
11a.	T.	Atony of Stomach.	12- 4-09	After Milk and Bread.	6	Golden Yellow.	Alkaline.	1004	+	+	+	
11b.	T.	Atony of Stomach.	1- 2-10	After Tea and Sugar.	6	Golden Yellow.	Alkaline.	1003	O	+	+	
11c.	T.	Atony of Stomach.	1- 5-10	After Tea and Sugar.	6	Golden Yellow.	Alkaline.	1006	+	+	+	Albumin, one-third present. Catgut and thymus entirely dissolved. For control catgut and thymus are left in a stomach filtrate (HCl + Acidity 56) for 24 hours. Catgut has disappeared, thymus is disintegrated. Microscopically no nuclei are seen.
11d.	T.	Atony of Stomach.	1-16-10	After Tea and Sugar.	10	Golden Yellow.	Strongly Alkaline	1007	O	+	+	Catgut disappeared after 10 hours.
11e.	T.	Atony of Stomach.	3-27-10	Fasting. Pump Swallowed without Water.	9	At First Clear. Later Turbid Yellow.	Alkaline.	....	O	O	O	
11f.	T.	Atony of Stomach.	4-10-10	After Tea and Sugar.	24	Golden Yellow; Thick Mass.	Alkaline.	1009	O	+	+	Albumin, two-thirds present. Patient had suffered a few days previous from ptomaine poisoning. At first 8 c.c. are aspirated in three-fourths hours, then secretin gr. 1 is administered subcutaneously; then 18 c.c. are obtained for the next 15 minutes by aspiration.
12	H.	Hyperchlorhydria.	11-23-09	After Tea and Sugar.	20	Yellow.	Alkaline.	1005	+	+	+	
13	McE.	Hyperchlorhydria.	12-11-09	After Tea and Sugar.	9	Golden Yellow.	Alkaline.	1008	+	+	+	
14	S. K.	Hyperchlorhydria and Dilatation of Stomach.	11-28-09	After Tea and Sugar.	..	Yellowish.	Acid HCl. +	.....	...	...	..	The milk test showed that the fluid came from the duodenum.
15	Mrs. H. H. R.	Hyperchlorhydria; Enteritis Chronica.	4-12-09	After Tea and Sugar.	..	Yellowish.	Alkaline.	....	+	+	+	Albumin, one-third present. At first a thick mucous fluid without bile was obtained, later pure golden yellow bile.
16	Dr. Sh.	Hyperchlorhydria; Ulcer of Stomach.	2- 2-10	Fasting. Pump in Duodenum Over Night.	..	Clear, Light Amber.	Alkaline.	.....	..	+	+	Albumin, one-fourth present.
17	Miss M. V.	Ulcer of Stomach.	11-22-09	After Tea and Sugar.	..	Golden Yellow.	Acid HCl. +	.....	...	...	..	The milk test showed that the pump was in the duodenum.
18	D.	Hyperchlorhydria and Ulcer of Stomach.	3-22-10	After Tea and Sugar.	..	Watery, without Bile.	Alkaline.	....	+	+	+	Albumin, one-tenth present.
19	Dr. P.	Achylia Gastrica.	11-10-09	After Tea and Sugar.	..	Clear.	Slightly Alkaline	....	+	+	+	Albumin all disappeared in 3 hours.
20	Mrs. L.	Achylia Gastrica.	3- 7-10	After Tea and Sugar.	..	White Tenacious.	Strongly Alkaline	1002	+	+	O	
21	H. L.	Achylia Gastrica.	3- 7-10	After Tea and Sugar.	..	Yellowish.	Alkaline.	....	+	+	+	Albumin, one-fourth present.
22	T. C. A.	Achylia Gastrica.	4-18-10	After Tea and Sugar.	10	Greenish Yellow.	Alkaline.	....	+	+	O	
23	D. C.	Achylia Gastrica.	4-18-09	After Tea and Sugar.	8	Yellowish.	Alkaline.	....	+	..	+	Examined with the duodenal aspirating catheter.
24	Mrs. J. R. S.	Achylia Gastrica.	2-28-10	After Tea and Sugar.	2	Golden Yellow.	Alkaline.	....	+	+	+	Albumin, one-half present.
25	W. J. C.	Achylia Gastrica.	3-31-10	After Tea and Sugar.	8	Golden Yellow.	Alkaline.	1008	+	+	Slight	Albumin, two-thirds present.
26	Dr. S.	Enteritis Chron.; Atony of Stomach	3- 4-10	Fasting and Water	15	Golden Yellow.	Alkaline.	1003	+	+	+	Albumin, one-half present.
27	T. F. M.	Diabetes Mellitus; Euchlorhydria.	3- 6-10	Fasting and Water.	10	Yellow, Turbid,	Neutral.	....	+	O	+	Albumin, one-half present.
28	Mrs. S.	Diabetes Mellitus and Achylia Gastrica.	12-14-09	After Tea.	..	Bile Like.	Alkaline.	....	+	+	+	
29	Th.	Cholelithiasis and Achylia Gastrica.	1- 3-10	After Tea and Sugar.	10	Yellowish, Turbid.	Alkaline.	1010	+	+	+	Albumin, one-third present.
30	D.	Icterus Chronic et Tumor Hepatic.	12-19-09	After Tea and Crackers.	10	Watery.	Alkaline.	1006	+	+	+	No bile. In stomach contents HCl. was present.
31	Mrs. F.	Chronic Jaundice.	1-19-10	After Breakfast.	15	Watery.	Alkaline.	....	+	+	+	No bile. Albumin, one-half present.

(Continued on next page)

TABLE OF EXAMINATIONS OF DUODENAL CONTENTS—Continued

No.	Name.	Diagnosis.	Date of Examination.	In What Condition Examination is Made.	Amount in c.c.	Appearance.	Reaction.	Specific Gravity.	Steapsin.	Amylopsin.	Trypsin.	Remarks.
32a.	L.	Chronic Jaundice.	1-19-10	After Breakfast.	..	Yellowish.	Alkaline.	....	+	+	+	Contains bile. Albumin, two-thirds present. Stomach contents show absence of HCl.
32b.	L.	Chronic Jaundice.	3-15-10	After Tea and Sugar.	..	Whitish.	Alkaline.	....	+	+	+	Albumin, one-half present.
33	M. O.	Chronic Jaundice; Tumor of Liver; Hyperchlorhydria	12-16-09	After Tea and Roll	..	Golden Yellow.	HCl + Slightly Acid.	....	..	..	..	Contents of a golden yellow color mixed with mucus. Stomach contents showed no bile, acidity 90.
34	Bu.	Cirrhosis of Liver.	12-14-09	After Tea and Sugar.	12	Golden Yellow.	Alkaline.	1008	+	+	?	Trypsin very weak. Stomach contents HCl +
35a.	F.	Cirrhosis of Liver; Euchlorhydria.	2-22-10	After Tea and Sugar.	10	Yellowish.	Alkaline.	1005	+	+	+	Albumin, one-eighth present. Thymus nuclei disappeared. Connective tissue partially dissappeared.
35b.	F.	Cirrhosis of Liver; Euchlorhydria.	3-1-10	After Tea and Sugar.	10	Yellowish.	Alkaline.	1004	+	+	+	Albumin, one-fourth present.
36	R. H.	Cholecystitis.	12-19-09	After Tea and Roll	..	Yellow, Thick and Turbid.	Alkaline.	....	+	+	O	Stomach contents showed presence of HCl and an acidity of 35.
37	H.	Cancer of Liver.	2-20-10	After Tea and Sugar.	8	Golden Yellow, Mixed with Mucus.	Alkaline.	1004	+	+	+	Thymus nuclei disappeared, connective tissue present.
38	A.	Banti's Disease.	3-2-10	After Tea and Sugar.	10	Golden Yellow.	Alkaline.	1007	+	+	+	Albumin, remains only in minute trace.
39	Y.	Hyperchlorhydria and Neurasthenia.	3-6-10	After Test Meal.	8	Golden Yellow.	Alkaline.	....	+	+	Slight	Albumin, two-thirds present.
40	B.	Ulcer of Stomach.	3-14-10	After Tea and Sugar.	10	Golden Yellow.	Alkaline.	1005	+	+	+	Albumin, one-eighth present.

In Case 14 (severe hyperchlorhydria and atonic dilatation of the stomach), in Case 17 (ulcer of the stomach with continuous vomiting), and in Case 33 (hypertrophic cirrhosis of the liver with chronic jaundice and intense hyperchlorhydria) the duodenal contents were acid and contained small quantities of free hydrochloric acid. The tests for the ferments were negative. In all other cases the contents were slightly alkaline or neutral and only rarely slightly acid. Case 15 (hyperchlorhydria and chronic enteritis) yielded a thick mucous fluid, to which later a pure golden yellow bile was added.

Seven cases of achylia of the stomach (19-25) showed twice an entire absence of trypsin and once a weak trypsin reaction whereas the other ferments were present. In one case of diabetes mellitus with normal stomach secretion (27) the contents showed absence of amylopsin, whereas the other ferments were present. Another case of diabetes with achylia (28) showed the presence of all the pancreatic ferments. In Case 29 (cholelithiasis and achylia gastrica) the contents were yellowish and turbid, but contained all the ferments. Four cases of chronic jaundice (30-33) showed the following result: in two (30 and 31) the duodenal contents did not reveal a trace of bile, while all the pancreatic ferments were present. In Case 32 a little bile was present once, another time it was absent. In Case 33 bile was present, mixed with mucus; hydrochloric acid was also present in small quantities.

Two cases of cirrhosis of the liver (without icterus) (34-35) showed good duodenal contents with bile; in one (34) trypsin digestion was very weak. In one case of cholecystitis (36) the contents were yellow but thick and turbid and showed no trypsin reaction.

Case 37 (cancer of liver) furnished a golden yellow juice mixed with mucus, showing all the pancreatic ferments. Case 38 (Banti's disease) showed normal duodenal contents. Case 39 (hyperchlorhydria and neurasthenia) showed weakened trypsin digestion and 40 (ulcer of stomach) normal duodenal contents.

In the column "Remarks" (Cases 7a, 11c and d, 35a, 37) a few experiments have been recorded, to test the relation of duodenal contents in reference to nucleus and connective tissue digestion (thymus and catgut). For comparison the effect of gastric contents on the same substances was noted in each instance. It was found that catgut as well as connective tissue (as contained in the raw thymus gland) can disappear entirely in neutral or weakly alkaline duodenal contents and that the nuclei of the thymus gland can also be digested in the stomach contents. Thus both these specific reactions (connective tissue for gastric digestion, and nuclei for pancreatic digestion) prove themselves to be entirely unreliable and without significance.

Among "remarks" we also find an experiment with secretin, showing the marked influence it has on the augmentation of secretion of bile and pancreatic juice (Case 11f).

I wish to emphasize particularly a few points.

1. Achylia Gastrica.—Among the seven cases of achylia gastrica trypsin was absent twice and once was only very weak, whereas steapsin and amylopsin were present. The disturbance of the pancreatic function in the above affection of the stomach explains why we frequently find intestinal troubles associated with it.

2. Admixture of Mucus.—An admixture of mucus with the duodenal contents occurs in two ways and is probably of some significance. The mucus may be evenly and intimately mixed with the contents, or it may appear at intervals in the relatively clear contents of the duodenum. The latter would point to the origin of the mucus from the duodenum, whereas its intimate admixture would point to its origin either in the pancreas or the bile passages. Presence of mucus in conjunction with other clinical symptoms (diarrhea, distress some time after meals) would lead us to think of duodenal catarrh (Case 15, Mrs. H. H. R.).

3. Absence of Bile.—Occasionally we obtain on aspiration of the duodenal contents at first only a clear or slightly amber-colored fluid. It is of alkaline reaction and contains the pancreatic ferments. Usually after waiting a short time and after repeated aspirations a golden yellow fluid (containing bile) appears. This has no diagnostic significance. If, however, after patient waiting and aspirating, only pancreatic juice but no trace of bile appears, it may be of some importance, particularly in cases of chronic jaundice. If bile is present in the duodenal contents a complete occlusion of the common bile-duct can be excluded. If the bile is entirely missing and pancreatic juice is present, it points to the seat of the obstruction above the common duct.

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Even if the results of these examinations are only meager, I should like to call attention to the fact that this field is entirely new and as yet hardly invaded. It might be expected that further work in the same direction will reap rich fruits not only with regard to diagnosis but also for therapy.

20 East Sixty-third Street.

THE CUTTING IN TWO OF A LARGE STEEL PIN WHILE TRANSFIXED IN THE LEFT BRONCHUS AND ITS REMOVAL BY LOWER BRONCHOSCOPY

A BRONCHOSCOPIC PIN-CUTTER AND FRAGMENT-HOLDER, DEVISED TO MEET THE EMERGENCY

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CHICAGO

The conditions which result from secondary infection, bound to occur in time at the site of a foreign body, which remains unrecognized or unremedied in the bronchopulmonary tract, must often have been mistaken for primary tuberculosis or other initial disease; for instance, a chronic pulmonary abscess, menacing to life, eluded all efforts to establish its cause until the sudden expulsion by cough of a spicule of bone, which was followed promptly by healing of the abscess. But that secondary infection may be delayed, for weeks or months, with little or no suffering, provided the foreign body be

Fig. 1.—Vertical false shadow "very like a pin" on the right side, the real shadow being on the left side, obscured by the sixth rib.

of narrow caliber, non-obstructive and non-absorbent, was notably evident in connection with the glass-headed, 1½-inch, very sharp, black steel pin, which lodged in part at the bottom of the left bronchus and in part within the first bronchial branch of a 15-year-old girl. In this position the pin had remained undisturbed and undisturbing for a period of ten weeks, having caused, during only the first week or two, mild coughing spells with sensations of pin-prick and slightly blood-stained expectoration—symptoms which merely encouraged the family to hope that the pin would be coughed up; while afterward the absence of suffering encouraged the thought that it probably had been coughed up. Freedom from suffering for so long a period naturally leads a patient to forget or at least to doubt the continued presence of a foreign body, and as the physical signs are apt to be equally indefinite it is only since the discovery of the *x*-ray, supplemented now by bronchoscopic inspection, that a means of positive demonstration has existed.

Two delusions, however, in the interpretation of the radiographs, which were taken after physical examinations of the chest at the end of the ten weeks, had failed to elicit any definite signs on which a diag-

Fig. 2.—The pin in the left sixth intercostal space at the back, on the same plane as the third rib in front, and at the same level as the first bronchial branch, where the pin was found.

nosis could be based, will serve to remind us of the shortcomings of the *x*-ray and to accentuate the need, as well as availability, of direct observation through the bronchoscopic tube for orientation of the foreign body in position and for establishing its precise conditions, before one can feel assured of its ready removal. One of these delusions concerned a false shadow on the right side in the first *x*-ray plate, a shadow "very like a pin," so much so that it was for a time mistaken by every one, whereas the pin was lodged on the left side, its real shadow being visible but obscured in the shade of the sixth rib (Fig. 1). The other delusion resulted from the idea conveyed by the radiograph of a greater than the actual depth of the location of the pin in the bronchi, a fallacy due to difficulty in realizing that the sixth intercostal space at the back, the site of the pin shown in the radiograph, is on a plane not deeper than that of the third rib in front (Fig. 2), and that the bottom of the bronchus at the site of its first branch, where the pin was found, corresponds to the same plane. Notwithstanding comparative measurements, I was expecting to meet the pin lower down in the bronchial tract.

The manner in which the accident occurred is worthy of comment in order that women may be warned against a certain habit while dressing, for the pin had dropped so easily and naturally into the bronchial tubes, lodging where its transfixion by the impact of cough was inevitable, that one must regard it as an accident liable to repetition.

The young woman, with pin in mouth and skirt in hand, in readiness to drop the skirt by encircling it over her head, raised very high her outstretched arms—an act which is iden-

tical with the first movement in Sylvester's method of resuscitating suffocated persons, a method which owes its power to the fact that raising the arms, forcibly expands the lungs and causes an inrush of air, the mouth opening, itself, as if by instinct; and, at the same moment, in readiness to let the skirt fall clear of her hair, the head was thrown backward and face upward—an attitude which is identical with the sword-swallower's position, so called because it brings the mouth, larynx and windpipe into a straight vertical line. The pin, let loose by the involuntary parting of the lips, simply dropped, with

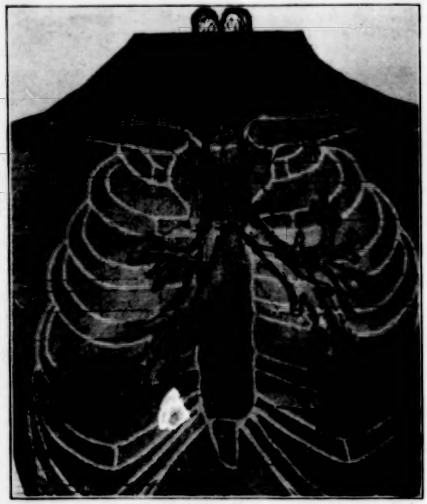

Fig. 3.—The transfixed position of the pin in the bronchial tree (Jackson) and thorax (McClellan).

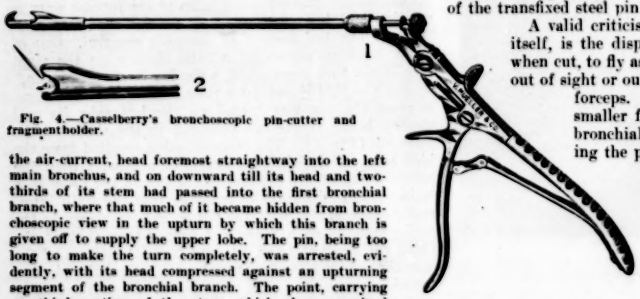

Fig. 4.—Casselberry's bronchoscopic pin-cutter and fragment holder.

the air-current, head foremost straightway into the left main bronchus, and on downward till its head and two-thirds of its stem had passed into the first bronchial branch, where that much of it became hidden from bronchoscopic view in the upturn by which this branch is given off to supply the upper lobe. The pin, being too long to make the turn completely, was arrested, evidently, with its head compressed against an upturning segment of the bronchial branch. The point, carrying one-third portion of the stem, which alone remained exposed to bronchoscopic view, projected from the orifice of the branch diagonally upward across the rear segment of the main bronchus, its end impinging against and its point inserted into the wall of the bronchus (Fig. 3).

The precise location of the pin, with the fact of its transfixion, was first ascertained only by the upper bronchoscopy at the first operation, an operation which, though it failed for the moment to remove the foreign body, fulfilled its avowed alternative purpose, to obtain information which would enable one to remove the pin at a subsequent operation, and without which the plan of cutting the pin in two could not have been formulated. The fact that both ends of the pin were up against a barrier explains how, by the impact of cough, the pin-point had been driven so firmly into the bronchial wall and why the repeated efforts at the first operation to displace the pin should have failed.

I need not particularize the first operation except in so far as these efforts to displace the pin tended to show the actual necessity for cutting it. A skilled first aid, Dr. G. P. Marquis, an expert anesthetist, Dr. Herman Peterson, an excellent mechanician, Mr. V. Mueller, suitable hospital facilities at St. Luke's and approved appliances were all at hand, the patient's head being satisfactorily held in the Boyce position by Dr. E. W. Bodman. Tubes of the Brunig-Killian and Jackson types were passed by the mouth through the larynx and downward, the first one, inadvertently, being passed over and beyond the pin, which rather hugged the back wall of the bronchus, but on withdrawing the tube somewhat, the exposed third of the pin came plainly into view. No difficulty was encountered in grasping the pin repeatedly through the tube, at a depth of about 11 inches, with various bronchoscopic forceps, the grasp being renewed to change forceps or the vantage-point of its grip no less than twenty times in order to apply leverage and reasonable force in every promising direction; but all without avail, other than a spontaneously uttered conviction, when the attempt was given up for the time, that the pin must first be cut in two.

Among the multiplying number of foreign bodies in the bronchial tract which are now being brought to light through the efficiency of the bronchoscopic methods introduced by Killian and advanced by Jackson, Ingals, Coolidge, Mosher and others, it is probable that additional cases complicated by transfixion will be encountered; hence, I propose as a general principle, the plan adopted in this case, of facilitating the bronchoscopic extraction of immovably transfixed pointed objects, such as pins, needles and perhaps open safety-pins, by first dividing them, via the bronchoscopic tube, into two or more parts; and I commend the instrument or pin-cutter devised for this purpose as a desirable addition to our bronchoscopic apparatus. The chief import of my theme can be expressed in the statement that, had the device (Fig. 4) and the principle now proposed for its use been already in vogue, a second operation for the extraction of the transfixed steel pin would not have been required.

A valid criticism, which will at once suggest itself, is the disposition of the parts of a pin, when cut, to fly asunder, hence, possibly, to drop out of sight or out of reach of the bronchoscopic forceps. Thus, I feared that my smaller fragment might get lost in the bronchial secretion and, as after dividing the pin, less than a quarter-inch of the larger fragment would remain exposed, I feared that it might disappear, by retraction, wholly around the curve of the bronchial branch. But neither of these contingencies occurred. I had modeled in the rough the beak-shaped slotted scissor-like device shown in Figure 4, to cut into two pieces, not punch into three, with the expectation, further, that one of the two pieces might adhere in its beak, thus limiting at least the scattering of fragments. My suggestions were skilfully elaborated by the makers (V. Mueller & Co.), and happily the mechanism even exceeded my expectations in this regard. I observed while testing the instrument that not only, as expected, would one of the fragments adhere in the serrated slit alongside the bevel, but that it

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adhered with dependable regularity and firmness as long as the blades were not permitted to reopen; moreover, as it was invariably the end of the pin next to the beveled side of the blade which so adhered, the operator could elect the fragment to be held and the one to be let loose, provided the pin were transfixed in space enough to admit the jaws either under or over it, hence to turn the blade bevel next to whichever end he might elect.

Profiting by these test observations, I planned to minimize the risk of losing my smaller fragment by electing it to be held in the grasp of the pin-cutter, and to diminish the risk of letting loose my larger fragment by cutting it off not too close to the bronchial branch. Beyond these precautions the chance that the fragments might still get lost was, I felt, a bare chance that must be taken.

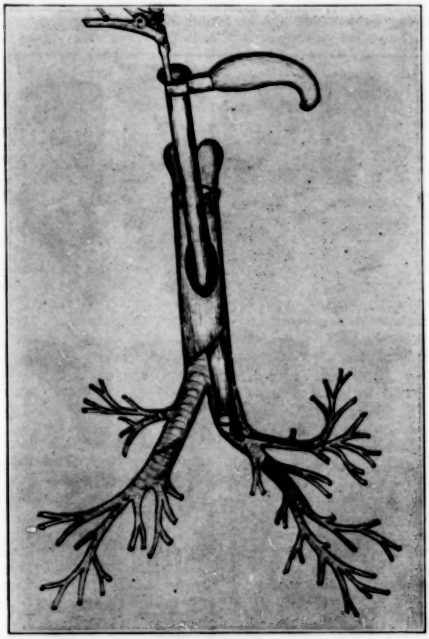

Fig. 5.—Diagram showing the method of cutting the transfixed pin in two.

I questioned the absolute necessity for shortening the route to the pin by opening the windpipe, but considering the novelty of the procedure of cutting the pin *in situ*, a position none too near at best, I deemed it inexpedient to add uncertainty by adding distance. It is now realized, however, that the pin-cutter and the principle of its use are applicable as well at the longer range of upper bronchoscopy. In fact, the only uncertainty encountered in the final operation was, not in cutting the pin, but in finding it before cutting it, a delay which was incidental to the tracheal opening, for the bronchoscopic tube, when entered at the incision was deflected by the chin somewhat out of its most favorable line; so despite the distally lighted Jackson tube, augmented by a Brunig-Killian headlight, and the best conditions for artificial lighting in the semi-darkened throat-room of St. Luke's Hospital, a combination which yielded a brilliant illumination of the bronchial tree, the pin, for a time, could not be seen. The same competent aids were present but having made the low tracheotomy as a first step in this operation, the patient's head had not been adjusted precisely in the Boyce position. A readjustment of the head caused the chin to drop out of the way, when on passing the tube again through the tracheal opening but directing it as nearly in the median line as during the upper bronchoscopy at the first operation, the pin came plainly into

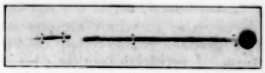

Fig. 6.—The pin in two parts; actual size.

view, being in the same location and in the same state of transfixion. A few additional efforts to extract it without cutting having proved futile, the pin-cutter (Fig. 5) came next in order. It operated exactly as planned; one could hear the snap, see the larger fragment shiver and then discern the small pointed piece in the beak of the instrument, held fast in which it was withdrawn. The larger piece settled somewhat, but its short exposed end was now an easy mark and in another minute, in the grip of a Jackson forceps, it also came safely out. (Fig. 6.)

34 Washington Street.

A PNEUMATIC SHIELD FOR OPERATIONS ON THE LUNG

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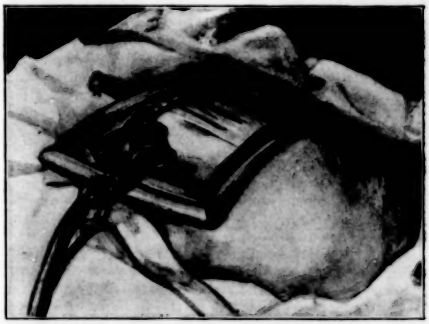
PHILADELPHIA

In thoracic surgery in man, positive or negative pressure devices are rarely essential. Either pleural cavity or even the anterior mediastinum may be invaded without, as a rule, a fatality from operation pneumothorax. It is a source of satisfaction, however, to have available



A pneumatic shield for operations on the lung.

an apparatus capable of almost instantly removing the condition of pneumothorax.

In 1908[1] I devised an aspirating shield to be applied over the wound under such conditions. The present shield is modified by omitting the metal rim and glass

1. Babcock, W. W.: The Operative Treatment of Pulmonary Tuberculosis; Report of an Excision of Over One-half of the Right Lung, THE JOURNAL, April 18, 1908, p. 1263.

window which interfered with accurate coaptation to the chest wall and substituting a simple inflated rubber rim in which is held a flexible celluloid window. The apparatus may be sterilized in the autoclave or in boiling water. A simple two-way cock connects the cavity of the shield at will with either the external air or a suitable vacuum tank. To overcome pneumothorax the shield is applied over the wound and the lever turned connecting the vacuum tank with the cavity of the shield until the lung is sufficiently inflated. The partial vacuum may be continued, or, if desired by gradually turning the lever so as to admit air one may observe the effect of a gradual reproduction of the pneumothorax. A form of artificial respiration may be produced by alternately producing and relieving the negative pressure in the thoracic cavity. The instrument may be applied during the suturing of the wound by moving the shield just in advance of the introduction of sutures. A final aspiration with the aspirating tube to free the chest of any residual air may be employed as the last suture is tightened. The large transverse area of the tubing renders the instrument efficient despite imperfect coaptation and considerable leakage. Leakage may be reduced by applying wet gauze against the sides of the shield. A regulating valve connected with the vacuum tank is desirable to prevent too violent aspiration and the production of traumatic emphysema.

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THE CLINICAL RECOGNITION OF THE SCAPHOID TYPE OF SCAPULA AND OF SOME OF ITS CORRELATIONS*

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In my communication, "The Scaphoid Scapula, a Frequent Anomaly in Development of Hereditary, Clinical and Anatomic Significance,"[1] presented to the St. Louis Medical Society, Feb. 5, 1910, I indicated the relative frequence of the scaphoid type of scapula in our population in dry bones and in fetal, embryo and monster forms. The main thesis of that communication was: The scaphoid scapula is an anomaly in development originating in the progeny from some abnormal circumstance operating in the parents, is thereafter transmitted from parent to child, and so on through several generations, and unless the abnormal circumstance again becomes operative in the descendants, the scaphoid scapula finally disappears and the racial type again becomes dominant.

I showed that it occurred most frequently in individuals deviating from the average in physical or mental endowments, or both, and stated that the natural habitat of the scaphoid scapula was in the deviate. I showed further that in individuals of the second generation in whose parents a definite abnormal circumstance—syphilis—had operated, the scaphoid type of scapula was correlated with certain conditions, such as nocturnal incontinence; with certain physical signs, such as catarrhal affections, adenoids, an abnormal degree of lymph-gland palpability, and above all, with vasculosclerotic changes occurring very early in life; in some detectable by the ordinary methods of clinical investigation as early as the fourth, and as a rule as early as the tenth, year of life; and in older individuals a degree of arteriosclerosis out of all proportion to their years. Even in individuals of the third and fourth generations, the last-mentioned correlations, amounting almost to parallelisms, will be frequently found. It is to the clinical recognition of the scaphoid type of scapula and of the correlations just mentioned, and to the recognition of others in the living subject, that I desire at this time to direct attention, since the appreciation of certain of these correlations is fundamental in the study of the causation of the scaphoid type of scapula and in the consideration of the many weighty and intricate problems that appear to be intimately associated with it.

The recognition of the scaphoid type of scapula in the living subject will not be found difficult if one remembers its characteristics as shown by my studies of dry bones, embryonal and fetal forms. Of these characteristics the following are usually readily discernible in the living subject: first, the vertebral border below the scapular spine is more or less concave; this may be almost or quite straight, slightly or distinctly concave; second, the scapular index is as a rule less; that is, the bone is longer in proportion to its breadth than in the average type (this may be roughly estimated in the living subject by noting the proportion between length and width of the body of the bone); third, the vertebral border in the scaphoid type more nearly parallels the

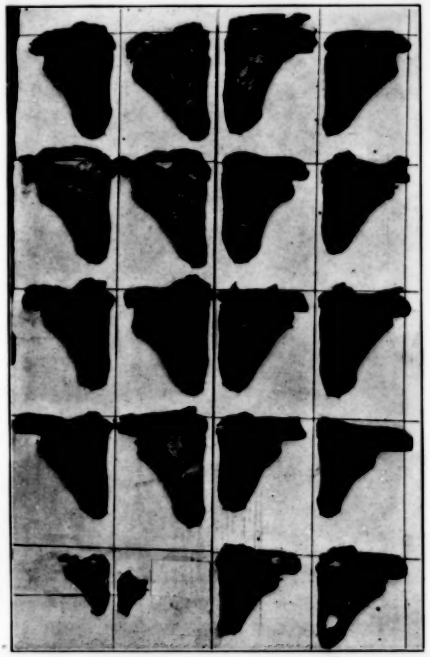

Fig. 1.—A group of scapulæ of the scaphoid type, all having rather decided incurvations of their vertebral borders.

* Presented to the St. Louis Medical Society, May 14, 1910.
1. Med. Rec., May 21, 1910, p. 861.

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long scapular axis and a straight line than in the average type of scapula; fourth, as a rule, the spine in the scaphoid type forms more nearly a right angle with the long scapular axis than does the spine of the average type; fifth, the vertebral border buds, tuberosities, varying in size and number, are much more common in the scaphoid, especially in those nearer straight, than in the average type of scapula; sixth, in the same subject having scapulæ of the scaphoid type, differences in size and form and specific differences in the contour of the vertebral borders are common.

Only in exceptionally thin individuals may one determine the other characteristic of the scaphoid type of scapula previously described; namely, the constant absence of lips and intermediary surface in those scapulæ which have marked concavity of the vertebral borders. Two or more characteristics will invariably be found in those individuals having the scaphoid type of scapula and these may usually be determined by inspection and palpation. In individuals who are exceptionally muscular or obese, the *x*-ray may supplement inspection and palpation, an expedient I have not thus far found necessary.

As a matter of course all clothing must be removed, at least to the hips, and the patient should assume his natural attitude, standing several feet in front of the examiner in good illumination. To appreciate natural attitudes fully, the patient should be inspected from the front, laterally, and from the rear, during which the shape of the chest, the abdomen, the course of the clavicles, the length of the neck, the muscular development, the spinal curves, etc., are studied. Then by examination of the scapular region, in average individuals the upward and outward slant of the scapular spines, the graceful downward and outward curves of the vertebral borders beneath the fibres of the trapezii and the underlying mass of the rhomboids attached to these borders may be made out easily. The course of the long scapular axis may thus be readily determined to be downward and outward, so that the bases of the scapular spines will be found to be from 2 to 6 cm. nearer the spinal axis than are the inferior angles.

In individuals having the scaphoid type of scapula, the picture is completely changed. The chest is frequently narrowed in all diameters, especially anteroposteriorly. There is often a narrow costosternal angle and floating tenth ribs; the clavicles very frequently take rather a horizontal course increasing the dimensions of the supra-clavicular regions, and there is often undue prominence of the acromioclavicular articulation. The shoulders hang, drooping downward and forward. The vertebral borders stand out prominently, wing-like, and especially that portion of the borders merging into the inferior angles. There is paralleling of these borders with each other and of these with the spinal axis, so that the distance between the inferior angles of the scapulæ and the bases of their spines is nearer equal, and in some instances the bases of the spines are further away from the spinal axis than the inferior angles of the bones. In many instances, even when the individual is caused to approximate the vertebral borders of his scapulæ by drawing the shoulders directly backward, the phenomena just described will still be apparent, though to a somewhat less degree. The sluggish attitudes of such individuals, especially of the shoulder regions, the frequent lowering of one shoulder and usually on that side where the scaphoid type of scapula is most marked, the changed relations of the vertebral borders with each other and of these with the spinal axis, have their foundation in the anatomic characteristics of this type of scapula mentioned above.

In individuals having average scapulæ, marked differences between them in the same individual will rarely be found; but this is so frequent in the scaphoid type of the scapula that it must be considered as one of its chief characteristics. Marked differences will be noticed not only in the contour of the vertebral borders, but in some cases in the breadth and length as well. The differences in size, and especially the differences in contour of the vertebral borders, should also be considered in determining the presence of the scaphoid type of scapula. In the cases in which the difference is quite decided, causing the lowering of the shoulder on the side where the scaphoid type is most marked, lateral

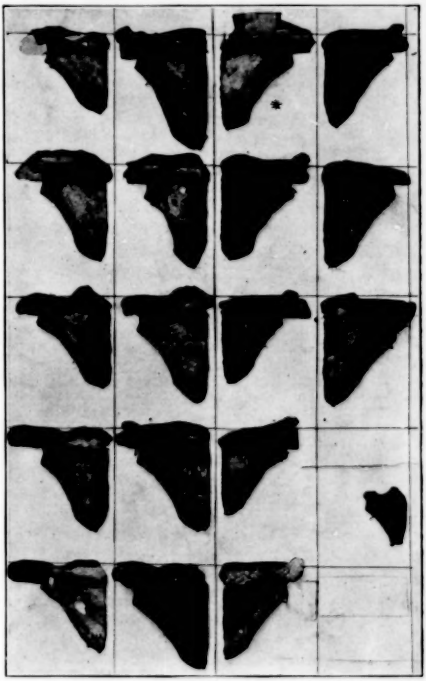

Fig. 2.—A group of scapulæ of the scaphoid type, all having more or less straight vertebral borders except the one with a star next it, whose border is slightly convex—a border-line scapula.

curvature of the spine is not infrequent. In some individuals who have acquired better attitudes of their shoulder regions an accentuation of the anterior curve in the dorsolumbar region occurs.

In thin individuals having the scaphoid type of scapula, the hollowing out of the vertebral borders may be readily appreciated merely by inspection. But to appreciate this better and the degree of it in each scapula, to appreciate the shapes of the bones as well as the presence of the vertebral border buds, palpation of the scapula should not be neglected. The marked dif-

ferences of shape and size of the scapula, as well as the degree of concavity of their vertebral borders and the number and size of the vertebral border buds, may be well appreciated in the living subject; but to facilitate this study, I reproduce here three series of bones illustrating the anatomic characteristics found in my studies of dry bones (Figs. 1, 2 and 3).

Before considering the clinical recognition of some of the correlations of the scaphoid type of scapula and the better to appreciate these, it will be well for the moment to direct our attention to the individuals in whom these are associated, and then by looking at a composite picture of such individuals to study the correlations at closer range. Confining our studies in the beginning to the individuals in whose parents an abnormal circumstance—syphilis—has operated, we shall find that such individuals, as previously pointed out, are of retrograding, deviating types. In any one of these, when compared with either parent or with his cousins, his uncles and aunts or with the average members of the community in whose parents the abnormal circumstance has not operated, deviation will be found in the physical or mental development, and usually in both. Among such progeny will be found many of the heretofore recognized anatomic, physiologic, psychic and psychoneurotic stigmata which I shall not here particularize.

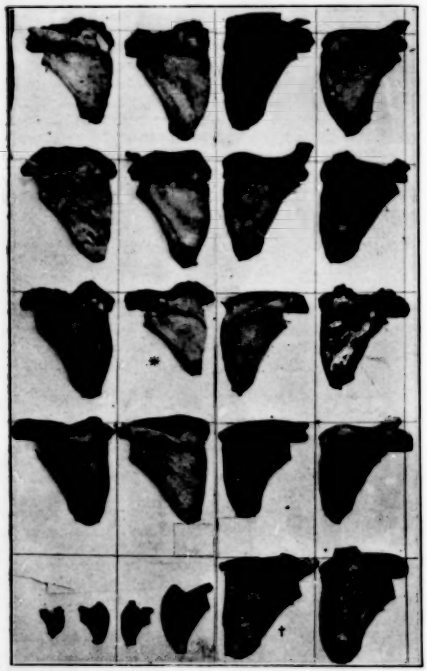

Fig. 3.—A group of average scapulæ, the dominant racial type, excepting the one with a star and that with a dagger near, these being border-line scapulæ but nearing the average type.

In only a few instances have I thus far found the well-marked scaphoid type of scapula in individuals even approaching average development. Such individuals are usually undersized, have sluggish attitudes, meager musculature and are strikingly lacking in the harmonies of physical development. They range in stature from dwarfs to giants, but whether the one or the other, or merely undersized, disharmony characterizes their physical development. Many of them, apparently physically normal at birth, in their later development show retardation or grow by fits and starts until near, either before or after, the usual age of puberty, they shoot up like weeds or forever remain stunted—blighted.

With the beginning of mental development such progeny are either backward and remain so, or they show—and this is the rule—precocity. If disharmony characterizes their physical development, it is especially true of their mental development. They have no childhood. They seem almost to jump from the cradle to adolescence. "My children are old in their ways" is a frequent expression of certain observing mothers, and they may add "They are almost always ailing." Or the unobserving mothers (and ignorance and mother-love and pride makes them so) may proudly say "My children are all healthy." Indeed, physicians usually consider such children healthy, or at least free from syphilitic blight, in the absence of "snuffles," eruptions of the skin and mucous surfaces, bone and joint affections, Hutchinson's teeth, interstitial keratitis, and deafness without otitis. Children of the second generation are as a rule older than their years; they are often ailing and are rarely healthy; but to appreciate the truth of these assertions we must, as physicians, study the individuals of families rather than the histories of individuals of families.

While idiocy, imbecility and backwardness in mental development are relatively frequent in the second generation, such mental states are by no means common. My studies of the offspring in whom an abnormal circumstance—syphilis—in the parents is beyond question, show precocious mental development to be the rule. Not only do such children appear like little old men and women in the seriousness of their ways and actions, their preference for books rather than play, and the society of their seniors rather than their kind; but as individuals, their facial expression is lacking in the freshness of infancy, childhood or youth and they ever afterward appear much older than their years.

Many of them develop sexual instincts long before puberty, and these are often gratified by masturbation, sexual intercourse, or otherwise. Strenuosity and intensity characterize many of these individuals, and before or during adolescence such mental proclivities, associated with the inherently weak constitution, sooner or later lead to an inevitable "break," and they make up a large percentage of the cases commonly classified as neurasthenia, hysteria and dementia præcox. Many cases of epilepsy developing in early or later periods of life are to be found in the individuals of the second and later generations. The incorrigible and so-called criminal classes are increased from the ranks of the second and later generations in a degree probably unequaled by that of any other source. Not a few individuals of the second generation, and many of the later generations, despite their handicap in physical and mental endowments, by learning to adjust themselves to their environment, lead successful, useful and even

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brilliant lives, though they rarely live out their expectancy in consequence of their abiotic natures.

If the antenatal mortality of syphilitic progeny is so great, it is but reasonable to believe that the influences underlying it are still operative in the living; if not the disease itself, its blighting influences as manifested by disharmony in physical or mental development, or both, by inability to stand the stress and strain of ordinary existence, by degenerative and involutional changes, and by lowered general resistance. Such progeny are truly abiotic; hence the instability of their natures, their proneness to so-called functional disturbances and to disease, to degenerative and involutional changes, to neuroses, psychoneuroses, psychoses, and above all, to tuberculosis.

In my studies of the scaphoid type of scapula and its correlations[2] I have been greatly impressed by the unusual frequency of tuberculosis in such progeny and in the progeny of later generations. This is not the place to dwell on the ramifications of the scaphoid type of scapula and some of its correlations in general and special pathology, but it seems proper to mention here the abiotrophies of Gowers, the neuroses and psychoneuroses and especially epilepsy, dementia praecox and tuberculosis, since my studies have shown the unusually frequent association with these conditions.

Nocturnal incontinence is relatively frequent in individuals having the scaphoid type of scapula and other correlations. It was present in about 16 per cent. of fifty boys, inmates of St. Joseph's Orphan Asylum, studied in a preliminary way, and it is such a very common condition in the second generation that it may well be considered one of the correlations of the scaphoid type of scapula. Fuchs[3] and Mattauschek,[4] in studying enuresis nocturna in adults, have shown in their cases anomalies of skin and tendon reflexes, slight sensory changes about the feet, syndactylism, deformity of the feet (pes planus, varus and valgus, etc.), the frequent association of the patency of the sacral canal in all degrees from spina bifida to the slightest change in the form and location of the sacral hiatus, the latter demonstrable only by the *x*-ray.

These findings caused Fuchs to assume an actual defect of development (myelodysplasia), meaning thereby an anomalous development about the lower part of the spinal cord. Fuchs has correlated the assumed myelodysplasia with distinct anatomic anomalies, and I have correlated similar anomalies with the scaphoid type of scapula.

The histories of catarrhal affections, tonsillitis, bronchitis, gastro-intestinal disturbance and adenoids, are unusually frequent in individuals of the second and later generations.

Of the boys studied in St. Joseph's Orphan Asylum having the scaphoid type of scapula and some of its correlations, about 60 per cent. are mouth-breathers. In a family of five children of the second generation, recently referred to Dr. R. P. Scholz, adenoids were found in all, and in four to a degree requiring operation. In a group of ten backward public school children studied with Dr. Scholz, having adenoids and mentioned in my first communication, all had the scaphoid type of scapula and other correlations. Since then Dr. Scholz has kept a careful record of those operated on by himself for adenoids, and in a recent conversation he informed me that fully 75 per cent. of them have the scaphoid type of scapula and some of its correlations. Adenoids, therefore, appear to be a very frequent correlation of the scaphoid type of scapula. The "adenoid face," consisting in a dull, vacant expression, dry and separated lips, poorly developed nostrils, etc., discerned by visual or digital examination, or both, renders the recognition of adenoids an easy matter.

A more frequent correlation is undue lymph-gland palpability, and this is so frequent that it is well-nigh constant. Enlarged anterior cervical glands are an almost constant accompaniment of adenoids, but the postcervicals, epitrochlears, and those above and below Poupart's ligament are those more easily palpable and those less frequently involved from peripheral infections; but even these enlarged from peripheral infections, the postcervicals from infections of the posterior portion of the scalp, the epitrochlears from infections of the more distal parts, and the inguinals above Poupart's ligament from infections, about the genitalia and below, of the distal parts of the extremities. In any case, the history or the presence of such infection, and above all the equal enlargement, right and left, will usually enable

Fig. 4.—A method of finger-tip palpation of the radial artery.

one to determine whether or not the enlargement is peculiar to the individual or due to some peripheral infection.

Pupillary anomalies, consisting of asymmetries and differences in size, are so common in individuals of the second generation as to rank as frequent correlations. Such findings should be considered only when neither iritis nor iridocyclitis causing synechia has existed, points readily determined by the history and inspection. In searching for pupillary anomalies, it must be remembered that clumpy distribution of pigment along the pupillary margin ("Ektropium des Pigment-Blattes der Iris"—Bach[5]) may cause a perfectly symmetrical pupil to appear flattened, oblong or cornered. The examination by focal light may readily exclude this condition. The Argyll-Robertson pupil with an otherwise intact nervous system is relatively infrequent in the second generation, though almost invariably associated with the scaphoid type of scapula and other correlations when present. The same may be said of Hutchinson's teeth, interstitial keratitis, deafness without otitis, hypotonia of certain muscle groups, absent knee-jerks and the usual signs of congenital lues heretofore recognized. Juvenile paresis and tabes are almost invariably asso-

2. In a paper soon to appear, prepared in collaboration by Dr. O. H. Brown and myself, we shall show the frequent association of tuberculosis with the scaphoid type of scapula and some of its correlations.

3. Fuchs, Alfred: Ueber den klinischen Nachweis kongenitaler Defektbildung in den unteren Rückenmarksabschnitten ("Myelodysplasie"), Wien. med. Wchnschr., 1909, Nos. 37-38.

4. Mattauschek, Emil: Ueber Enurisis, Wien. med. Wchnschr., 1909, No. 37.

5. Bach, Ludwig: Die Pupillinlehre, 1908.

ciated with the scaphoid type of scapula and its chief correlations, and in my first communication I pointed out the frequency of this association with syphilis of the nervous system, with acquired tabes, paresis and other abiotrophies of Gowers.

In my studies of senility, of the later manifestations of acquired lues, and of individuals having the scaphoid type of scapula, I have been impressed with the peculiar appearance of the conjunctivæ over the sclerotics, which I have noted in my findings as "varnished scleræ." The varnished sclera is present as a rule in healthy individuals as early as the thirty-fifth or fortieth year of life and it increases with succeeding years. Its chief characteristic is a shiny, glistening appearance on a rather undulating, and in older individuals, a slightly yellowish background, so that the surface of the conjunctiva lying on the whitish sclerotic glistens like the cornea. In individuals free from senile changes the surface of the conjunctiva has a more smooth and less shiny appearance—is even dull when compared with the surface of the cornea; so that in such persons there is a distinct contrast between the brilliancy of the surface of the cornea and that of the conjunctiva on the bluish-white background of the sclera. The lack of contrast, on the other hand, is probably one reason for the expressionless

Fig. 5.—Another method of finger-tip palpation of the radial artery.

eyes of tabetics and paretics and the main reason for the "settled look" in the healthiest of us after the thirty-fifth year of life. The undulating appearance is probably due to wasting of the episcleral or subconjunctival tissue and to the thickening of the walls of the conjunctival vessels, and, in addition, in older individuals, to wasting of the conjunctivæ analogous to that of other mucous surfaces and the skin in senility. The presence or absence of "varnished scleræ" may be readily determined on drawing down the lower lids when the patient is facing the light and directing his gaze somewhat upward. In such position we may readily appreciate the appearance of the conjunctiva if varnished, its tints, its undulations, and lastly, the undue tortuosity of the conjunctival vessels—a sign usually associated with and paralleling it. When the "varnished" appearance is well marked the tortuous vessels seem to lie, rather, on than within the conjunctival tissue. Punctate hemorrhages into the conjunctival and even into episcleral tissues will frequently be found associated with the signs just mentioned.

Aside from the chief correlation of the scaphoid type of scapula, namely, the characteristics of the whole individual, probably the most constant, and to my mind the next in importance, is the correlation of vasculosclerotic changes at an unusual period of life and in older persons out of all proportion to their years. The varnished scleræ and the undue tortuosity of conjunctival vessels are probably due mainly to vasculorsclerotic changes of the conjunctival vessels. The study of these vessels with Luedde's modification of the Zapski binocular corneal microscope, as previously pointed out, appears to offer a ready means of detecting the presence of vasculosclerotic changes, from whatever cause, long before they might otherwise be recognized in the living subject. At any rate this instrument offers additional means of securing corroborative evidence—and it is impossible to have too much of this. With this instrument one may readily see the blood coursing through the conjunctival vessels and discern thickening, crinkling and aneurismal dilatations of their walls.

In certain congenital deformities correlated with the scaphoid type of scapula, studied conjointly by Drs. Luedde and V. P. Blair, evidence of such changes have been found in the conjunctival vessels of nursing infants. By the ordinary methods of clinical investigation, as previously pointed out, I have found evidence of vasculosclerotic changes as early as the fourth, and almost constantly as early as the tenth year of life in individuals of the second generation. A number of these, studied by me, have also been studied by Dr. Luedde and in no instance has he failed by studying the conjunctival vessels to find evidence of vascular changes. The almost constancy of vasculosclerotic changes in individuals of the second generation and our ability to detect them so early in life warrant the deduction that such changes begin during development *in utero*—in other words, the children are born with a degree of arteriosclerosis.

Clinical evidence of arteriosclerosis in the living subject is considered ample when two or more of the following findings are demonstrable: undue palpability of radial and other vessels, visible pulsation in the brachials, undue tortuosity in these, the temporals, and other vessels, including the conjunctival vessels, undue accentuation of the second aortic sound and the determination of the functional worth of the heart muscle. To these must be added an estimation of arterial tension with a suitable apparatus, though alone it is of but little value in determining the presence of arteriosclerosis.

A detailed description of the methods usually employed in studying the cardiovascular apparatus would be superfluous here. But the palpation of vessels is such an important procedure in determining the presence of arterial thickening that I may be pardoned for calling attention to the necessity of accuracy in technic, even in the frequent and time-honored practice of feeling the pulse.

Not only the radial, but the brachial, temporal, posterior tibial and dorsalis pedis, should be palpated and compared, right and left, in our search for vascular changes. Sahli's three-finger method is invaluable in estimating the qualities, tension, etc., of arteries; but in determining sclerotic changes in them it is not to be recommended, because sensation coming in from three fingers is more dispersed than when only from one. In order to determine the sclerotic changes, one should employ, as a rule, one, never more than two, fingers, and two only in cases in which the tension is so great as to interfere with firm palpation with one finger. In counting the pulse, it matters little whether one feels with one's finger-ball or one's finger-tip; but in feeling—in palpating—the vessel-wall with only the ball early and even decided changes may be entirely over-

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looked. One should, therefore, use the finger-tip in palpating arteries, because the tip is more sensitive than the ball, has less subcutaneous tissue, and more readily adjusts itself to the vessel.[6] The tip of the finger should be placed perpendicularly to the vessel at first lightly, to become aware of pulsation, then with gradually increasing pressure one should roll or attempt to roll the vessel. A moderate-sized artery, such as the temporal or radial when not thickened, is felt to collapse under the increasing pressure and it is with difficulty differentiated from adjacent structures.

When such a vessel is thickened—sclerosed—the wall remains more round, the finger-tip glides over its rounded surface, and one feels a degree of rigidity not present in normal arteries. Sclerosing arteries are frequently unduly tender to firm finger-tip pressure, more so than adjacent structures, the unpleasant sensation persisting at times for several minutes after the pressure has been removed, a point frequently mentioned by patients. As the finger-tip has less subcutaneous tissue than its ball (one reason why it should be employed), it is evident that its applied pressure should be at a point along the course of a given artery where it lies directly over bone and free from overlying muscle. Figures 4 and 5 represent two methods of finger-tip palpation of the radial artery.

In my first communication, I referred to vasculosclerotic changes as a sort of connecting thread between the syphilitic and his progeny. In my studies of many individuals and families on which that and this communication are based, a degree of such changes out of all proportion to the years is the one preeminent clinical fact discernible in the individual who has acquired syphilis, and it is the one significant clinical fact discernible in his children and his children's children. It is, probably, the main cause of the frightful antenatal and postnatal mortality among such progeny; probably the main cause of their lessened expectancy in life; of their proneness to disease—to degenerative and involutional changes; to the so-called functional nervous disorders and the underlying cause of tuberculosis in them—for is not the blood the life thereof?

Admitting vasculosclerotic changes to be even a frequent correlation of the scaphoid type of scapula, is it not incumbent on us to search for and establish its cause and that of its other correlations? My studies, extending over a period of more than three and a half years, indicate far-reaching ramifications of the scaphoid type of scapula and its correlations—a rather definite syndrome in both general and special pathology. The frequency of what may be called the scaphoid type of scapula syndrome in our population, occurring in all branches of society, seems to postulate a single cause and one sufficiently potent to modify profoundly the growing organism from its very foundations. Thus far I have found no other cause than syphilis in the ascendants, but my studies have been too brief and too incomplete to enable anyone to draw definite conclusions from them and apply them to every individual in whom this syndrome may be found. This seems certain, however: nothing occurring in the life of an individual after his birth can give him the scaphoid type of scapula and its correlations.

Before one may determine the significance of this syndrome in any individual, the individual must be studied from every angle and in a comparative way with the members of his own family and with average members of his community. With the use of modern refinements in clinical investigation; with the use of laboratory methods, merely to confirm and to control clinical deductions; with patient study of individuals and of the individuals of families rather than the histories of individuals of families on the part of many workers, the ultimate cause or causes, as well as the hereditary, clinical and pathologic significance of the scaphoid type of scapula and its correlations may readily be determined.

My studies thus far warrant my saying at this time that such research on the part of many workers will undoubtedly lead to more complete recognition of syphilis and of its blighting influence in the individual affected, in his children, and in his children's children. Out of such recognition, let us hope a sane prophylaxis may be developed, whereby much suffering which now comes to humanity from this insidious enemy of the human race may in succeeding generations pass away from the earth forever.

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6. Wertheim-Salomonson (Die Nagelpalpation der Arterienwand, Salomonson, Deutsch. Arch. f. klin. Med., 1910, xcviii, Nos. 4-6; abstr. in THE JOURNAL, A. M. A., April 16, 1910, p. 1345) has recently called attention to the value of finger-nail palpation of arterial walls and emphasizes the point that the nail should be placed perpendicularly to the skin, thus calling into play the entire innervation of the nail-bed. Whether the "nail" is more sensitive than the "tip" is questionable. Nevertheless the method seems valuable and should be employed

INGUINAL HERNIA FOLLOWING APPENDECTOMY*

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During the past twenty-five years the pathology of appendicitis has been cleared up and the operative treatment has been elaborated and commented on so extensively that the entire country has been thoroughly informed of the gravity of the condition and equally convinced of the necessity for surgical treatment. Dexterous surgeons perform appendectomy with such marvelous simplicity and rapidity before admiring classes and visitors that the latter are impressed with the ease and rapidity of the operation, and fail utterly to realize that there is a surgical reason for every step of this procedure, or that this seasoned operator has worked many months or years to perfect his technic and to study out his attack along the lines of proper surgical anatomy. They see only the simplified application of correct principles.

The result of this is that surgery of the vermiform appendix is more extensively practiced than ever before, and consequently the profession is becoming more and more conversant with the sequelæ of appendectomy, both immediate and remote. It is evident that not every case of survival after the operation cannot properly be called a recovery. Many patients who do not die from the operation are disabled; for the sequelæ of all abdominal operations are increasing. This is not due wholly to the increase in surgery, but partly to the increase in the number of the men who do surgery. It is purely a matter of personal equation—of ignorance or disregard of surgical or anatomic principles. When a thorough knowledge of surgical pathology dictates the operation and a perfected mastery of surgical anatomy directs it, the results, both immediate and remote, were never so satisfactory as at present.

* Read in the Section on Surgery of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

Among the commonest sequelæ is hernia; when this is hernia of the abdominal wall or of the scar, it is as a rule the result of delayed union, impaired healing, or of improper suturing. Delayed union may result from a drain or from an infection of the line of incision subsequent to operation. Improper wall suturing may occur through undue haste, or through ignorance of the surgical anatomy of the structure penetrated.

This paper, however, deals only with inguinal hernia. The following case illustrates the type:

H. W., aged 24, was operated on Sept. 26, 1900, for an acute attack of appendicitis; wound closed without drainage; mural abscess evacuated on eighth day; recovery apparently complete on the twenty-first day. Patient resumed work on the twenty-third day after operation. On Feb. 2, 1901, patient presented himself for examination. Long broad scar in right hypogastrium showed evidence of suppuration. Palpation of wall failed to reveal weakness in line of suturing or in abdominal wall. Right inguinal hernia complete, oblique. First noticed as a sense of weakness about Jan. 1, 1901; then, lump appeared in groin, which eventually descended in to the scrotum.

This was an inguinal hernia that followed an appendectomy within four months, and the first of a series of cases that I have seen.

When right inguinal hernia appears as a sequel to an appendectomy, it can usually be ascribed to an infection of the abdominal wall, to destruction of the nervous supply of the inguinal canal, or perhaps to both. Infection of the wall above the deeper layer of the superficial fascia is not destructive of the essential structure of the abdominal wall, but if the intermuscular spaces are invaded there results a serious damage to the muscles as well as to the nerves.

Mural abscesses have been a very common complication of simple wound repair, and were ascribed formerly to improperly prepared suture material. A study of the bacteriology of the skin, however, will lead direct to the cause. The pyogenic organisms most commonly found in mural abscesses is the *Staphylococcus epidermidis albus* of Welch, and where mixed infection occurs, the staphylococcus is usually combined with the *Bacillus coli communis*. Hence the inference is natural that this infection comes primarily from the skin, either from puncture of the needle from unnecessary handling or from improper protection.

It is common experience that mural abscess almost invariably follows any inordinate hemorrhage from the needle wound, and not infrequently this hemorrhage is so sharp that it requires a compression ligature to control it. The blood from this puncture invites invasion by the bacteria of the skin, and the closed wound fulfils all the requirements of an incubator; and in about seven or eight days, just when the patient ought to be recovering, a mural abscess is discovered; repair is delayed and destruction of the integrity of the abdominal wall is reasonably certain. This interrupted recovery is decidely discomforting; but it becomes absolutely humiliating if in three to six months the patient returns with a right inguinal hernia as a remote result of the infection. Absolute hemostasis, or, if bleeding is unavoidable, the removal of blood by a small wick of gauze emerging from the lower angle of the wound, to be removed at the end of twenty-four hours, will prevent the blood-clot effectively and remove any possibility of mural abscess with its train of dire consequences.

The nerve-supply of the right lower abdomen may be damaged by sepsis, or by ruthless disregard of the course of these nerves in outlining the incision. The nerve supply of this region is obtained from the iliohypogastric and the ilio-inguinal. These nerves arise from the first lumbar with a contribution from the twelfth dorsal; they pass forward over the psoas muscle and penetrate the transversalis above the crest of the ilium and spread themselves in a fanlike manner between the internal and external oblique, perforating the external oblique from 1½ to 2 inches to either side of the linea semilunaris. After the perforation of the external oblique they become merely cutaneous nerves of sensation. But during their course in the intermuscular layer they supply the external oblique, internal oblique, transversalis, intercolumnar fascia and the conjoined tendon. Please note that the above-named structures comprise the anatomy of the inguinal canal.

Any surgical treatment that necessitates the exploration of the abdominal cavity, requires full knowledge of the structures comprising the wall of that cavity; the mere names will not suffice, but the nerves supplying the layers, their course, and distribution must be known, recognized and protected. It is not the object of this paper to discuss the various incisions preferred by surgeons in gaining access to the abdominal cavity; suffice it to say that any method or site of an incision which does not compromise the integrity of the wall, by reason of injury or destruction to important tissues, is surgically justified; and that any incision which has not that object in view is never surgically justified even if recovery without sequelæ should result.

The percentage of inguinal hernia following appendectomy is not large; but if it occurs at all, the proportion is altogether too large since the sequela can always be prevented by surgical knowledge of the structures of the abdominal wall and by surgical precaution to prevent wall abscess.

1222 Locust Street.

V. 55
1910

ABSTRACT OF DISCUSSION

DR. E. WYLLYS ANDREWS, Chicago: We are familiar with the occurrence of femoral hernia as a sequel to operation done for the cure of inguinal hernia or *vice versa*. There is dilatation of the one canal by reason of pulling upward or downward of its boundary. In the case reported by Dr. Pond there was evidently a weakening of this canal by the injury done to its upper boundary. It is probably true that we must revise our ideas of the pathogenesis of inguinal hernia to a considerable extent, from the important information recently obtained from the preformed sac, which it is now known exists not only in the well-known and well-recognized congenital hernia, but in a very large percentage of so-called cases of traumatic hernia. So that in traumatism we recognize only a slightly exciting cause or, as many of our corporation lawyers are now claiming, a non-existent cause. It may be that Dr. Pond's conclusions were based on an insufficient number of cases, if we lay a great deal of emphasis on the preformed sac as an element in all inguinal hernias. I cannot help recognizing the importance of the anatomic distribution of the nerves and the occurrence of the atrophic changes, which were probably all present in Dr. Pond's case.

Simulation of Pulmonary Tuberculosis.—The compulsory military service in Europe leads to considerable malingering to escape or shorten it, and the latest device of the kind is the simulation of the early signs of pulmonary tuberculosis. Dr. Batier has recently reported three cases of the kind in which the symptoms of the feigned disease promptly subsided when the patients were sent to the guard-house for their attempt to deceive the medical authorities. His communication is published in the *Tribune Médicale*, April 16, 1910, page 241.

PHRENITIS PROSTATICA*

JAMES F. PERCY, M.D.
GALESBURG, ILL.

Affections of the mind proceeding from the pathologic prostate gland have had no place in the literature of disease until 1907.[1] Before this date, the prostate had been considered only from the standpoint of urinary obstruction and infection. It is the purpose of the present paper to emphasize the surgical importance of the prostate along medicolegal lines. I can do this best, perhaps, by detailing the history of a recent case. By way of preface, permit me to say that this history is not an uncommon one. The difficulty has been to attribute the cause of the trouble to its source, viz., the diseased and usually hypertrophied prostate.

Mr. X, aged 66, has a history of prostatic irritation extending over a period of ten years; voids urine three to four times during each night; does not use catheter; amount of residual urine unknown; urine normal except for occasional hyaline casts; rectal examination shows large, soft prostate of estimated diameter of two and a half inches, with length of three inches; blood-pressure, 180; temporal vessels, tortuous; radial pulse, normal; no evidence of spinal cord or brain lesion. The patient is in good general health, except that he has called himself a sufferer from "dyspepsia," for many years. He has always had the reputation of a model citizen; is honest, truthful, and of good financial standing, and of exceptional judgment on general affairs; the father of three healthy children to whom he is devoted, as he also was to his wife when alive. About a year ago he began to furnish material for the scandalmongers of his city, because of his illicit sexual relationship with a woman of questionable character. This woman's domination over him seemed to be complete, even to the extent of transferring a portion of his property to her. He will go to any length, as far as untruthfulness is concerned, to protect what he calls the reputation of the woman in question. Only in this respect has the man's character changed. In all others, he is the same model citizen and father that he has always been.

I cannot report the surgical history of this patient. But he like many of those similarly afflicted, refused operation for fear that it might rob him of his excessive sexual desire. Others in my series of cases, however, supply the necessary postoperative history to show that a chain of certain definite symptoms can accompany hypertrophy of the prostate. These symptoms are usually manifested by immoderate sexual indulgence late in life, together with a distinct mental symptomatology along the lines of the psychic life of the afflicted individual. Unfortunately, these manifestations often occur in a form to discourage the belief that man was created in the image of God.

One of my patients, a physician, aged 68, with a large soft prostate and urinary obstruction, would not use a catheter except when compelled to. His most frequent method was to empty his bladder during intercourse with his wife, aged 64. The latter suffered from an intractable form of leucorrhea. Removal of this man's prostate cured his abnormal sexual life.

Another man, aged 74, first consulted his physician because of the waning sexual desires of his wife, aged 68. He wanted medicines from the family physician to restore her sexual powers. The wife begged the physician not to give her anything, but to do something for the husband. His history showed that the sexual congress averaged from two to four times every night. The family physician suspected some form of spinal cord or brain lesion, and the patient was sent to me for diagnosis. Nothing was found beyond what one would expect in a well-preserved old man. He was very much surprised when told that his sexual activity was absolutely abnormal, and that if persisted in, he would probably develop some form of spinal cord disease. This man had a very large prostate, and its removal stopped all of his abnormal sexual symptoms.

Many of these patients are cunning in a bunglesome way in their efforts to conceal their unappreciated affliction from the family and friends. In a former paper, I described, among others, two cases, in one of which the patient almost disrupted his home and the community in which he lived because of his sexual relationship with some of the lower animals. This man was a lawyer of good standing who had served a number of terms on the bench. He was absolutely cured by the removal of a very large, soft prostate, and has remained well, now six years. The other patient was a progressive business man of the intellectual type, who had scandalized the community by his unlawful relations with negro women. An abscess of his prostate, which destroyed half of it, and caused an atrophy of the remainder, cured him. Subjects of this disorder can be found in many of the almshouses, particularly, and in the government soldiers' homes, and they are frequently admitted under the mistaken diagnosis of senile dementia. Regardless of where or when found, whether in an insane asylum or in their homes, they always form a disgusting, but nevertheless pitiable, chapter in the phenomena of sexual excess. These are the men who, at 80 years of age, marry girls of 16. They also become the easy prey of designing women who are not 16. The legal documents which they sign, especially when they attempt to divide their property, are often biased by influences that have back of them a perverted mind made so by a diseased prostate. Two celebrated cases which occurred in this country within the last two years, are in this class. I am assured by those in a position to know that both of these men suffered from the delusional sexual irritation which is characteristic of this condition in a certain as yet unknown percentage of those suffering from an enlarged prostate.

To quote partially from my former paper:

> It is possible that a certain proportion of the sexual neurasthenics and sexual perverts may have as an explanation of their mental aberration, a pelvic rather than a brain pathology. Certain it is that an earlier recognition of disease of the prostate and its appendages, with the mental symptoms that may accompany it in the young or old male, would, in a certain proportion of cases, save the pride of the family of the sufferer, and prevent the moral health of the community from being undermined. The local conditions in the prostate seems to set up an irritation which is expressed through the sympathetic and cerebrospinal symptoms; and out of this will grow visions and mental vagaries until the old man becomes a prey to all sorts of phantasms that finally make his life a mere sexual fetish. Before a diagnosis of sexual neurasthenia or of senile dementia is assumed to be the final word, the possibility of prostatic disease should be eliminated, and if this is found, especially the large hypertrophied gland, its excision will show in a large proportion of the cases that the problem was a surgical rather than a neurologic one.

The symptoms so briefly enumerated above have back of them as yet an undescribed pathology. It would

* Read in the Section on Surgery of the American Medical Association, at the Sixty-first Annual Session, at St. Louis, June, 1910.

1. Tr. Western Surg. and Gynec. Assn., 1907; Illinois Med. Jour., November, 1908.

seem to me, however, that the tardy recognition of the thyroid as a cause of certain classical symptoms was to be paralleled when those of phrenitis prostatica were referred to their proper origin. The microscopic anatomy of a gland does not show its vital relationship either to other glands, or to the general economy. This is true of the thyroid, and I believe it to be true, also, of the prostate. No work that I am familiar with has attributed to the prostate an extra, or an internal, secretion; and yet, in ten out of the twenty-five cases 40 per cent. on which the studies in this paper are based, the patients had large, juicy prostates. In addition to this, all of the 10 had thick capsules, making their removal by the perineal route comparatively easy. The youngest of these ten patients was 63; the oldest, 75.

Shäfer has shown that the cortex of the suprarenals is probably a separate secreting gland tissue which may have a close relation to the sexual organs and to the pigments of the skin. Whether the changes incident to the enlarging of the prostate during the sunset period of life in the male augment or inhibit an unknown secretion, is difficult to say. Whether the hypertrophy destroys, as is evident in some cases of thyroid (colloid) enlargement, or whether it increases this assumed internal secretion, is unknown. As is well known, however, the feeding of thyroid extract in certain hypertrophies of the thyroid stops the symptoms of excessive blood-pressure (uninhibited suprarenalism), which coexist with this form of disease in some cases. It is not difficult to assume that some such problem as this may be back of the symptoms described in the title of this paper.

"The thousand-mouthed succulent prostate," as Keyes has well named it, makes the problem of separating the various secretions that enter into the seminal fluid an extremely perplexing one. I have had under way investigations that, it is to be hoped, will aid in the elucidation of this subject. It is possible that these investigations will show that the seminal vesicles have a realm of function that will suggest the suprarenals when the kidney is considered, or even the parathyroids when the thyroid is studied. Glands are the highly differentiated islands of the body, where the physical and psychic life come in touch with vital processes through the streams of nerves and vessels. The prostate is the sexual solar system. In the young man, when the functions of this gland or its environs become perverted from an infection or a neurosis, we have many times what Casper has termed sexual neurasthenia. When this irritation becomes pathologic to the degree found in hypertrophy of the prostate, we have a distinct and heretofore undescribed diseased condition of the mind that merits the title given it above. This condition, which is not senile dementia, is cured by excision of the prostate. Sexual neurasthenia, as it is found in those who are not old, usually has back of it some form of genito-urinary infection; while the senile hypertrophied prostate as a rule, gives no evidence of infection except in the occasional case in which the seminal vesicles contain pus not unlike the sealed tubes found in women suffering from salpingitis. The sexual neurasthenic, the young sexual pervert, adolescent sexual precociousness, and the senile sufferer from phrenitis prostatica, however, may be affected with one and the same thing, one condition being but a varying degree of the other; any one, or all of them, merely serving as a pelvic electric button which, depending on the stage of life in which the trouble manifests itself, merely serves to ring up the psychic life of the sufferer in various ways along the line of diminished sexual balance.

In closing, permit me the following word of argument. If the removal of postnasal adenoids can transform the mental, moral and physical life of a child from the abnormal to the normal, is it beyond argument that the removal of the prostate at the other extreme of life will not produce the same good results? Embryologically, adenoids are but an aberrant branch of the nervous apparatus, and the same primitive findings regarding the prostate place it, according to Walker, as a part of the sexual system. Remembering this, we need not be surprised that adenoids, when present, give rise to characteristic mental conditions, or that the hypertrophied prostate may cause a train of disgusting mental phenomena that also can be removed by well-applied surgery.

Whether phrenitis prostatica is due to an over supply or an undersupply of an as yet unknown internal prostatic secretion; whether it is merely an obstruction, developing mental symptoms by irritation and pressure of the nervous supply to the gland itself; or, whether the prostate, with its assumed internal secretion, is thrown out of rhythm with some other gland by the hypertrophy; whether this "other" tissue is the cortex of the adrenals, which some laboratory workers have shown to be hypertrophied in the lower animals possessing extraordinary sexual development, and "atrophied when the sexual power was low;" or, "whether it is due to some abnormality in the involution of the sexual organs"; or, whether, after all, the trouble is a central one following loss of control by the brain of the immoral impulses of our bodies, I do not know. But I do know that excision of the hypertrophied prostate, in the presence of the mental symptoms above described, will restore the unfortunate possessor of them to health.

ABSTRACT OF DISCUSSION

Dr. Harold N. Moyer, Chicago: The province of the Section on Nervous and Mental Diseases has been seriously invaded by the two papers on the program of the Section on Surgery, one proposing the cure of mental troubles by the removal of the prostate and the other proposing the cure of dementia præcox by removal of the thyroid. It is not questioned that the diseased prostate may cause symptoms such as Dr. Percy described and that these symptoms will in large measure be removed by removing the prostate. Unfortunately it leads into a rather discreditable chapter in the domain of surgery, in which surgeons have cut off and cut out for the cure of nervous disorders.

I would criticize Dr. Percy's paper in many particulars; in the first place, the title of the paper, "Phrenitis Prostatica," inflammation of the mind due to the prostate. The term "phrenitis" has not been used by an alienist for seventy-five years. Dr. Percy means a certain collection of mental symptoms that have their origin in the prostate, and are undoubtedly reflex in character. Some of the arguments he advanced, I believe, are not sound, although his conclusions are sound. In the cases of sexual perversion, or those in which there exists the symptom-complex described, one should not at once excise the prostate and expect to effect a cure. One should wait a few days to be sure that the prostate is diseased, because if it is healthy it will do no good to take it out. Next, one should consider if there is no other treatment for the diseased prostate but excision, or if there is any such thing as a stricture at the membranous urethra, granulation tissue in the sinus pocularis, and other things that might be responsible for the trouble and that can be relieved very greatly, at least, by some means other than removal of the prostate gland.

I think, however, that the paper is a lesson for the surgeon as well as for the neurologist. The surgeon should know that certain things may come from the diseased prostate originally,

although in exceptional cases, and for the neurologist to know that he is apt to neglect some things on the physical side of the case. No neurologist should attempt to treat sexual perversion or neurasthenia when symptoms point to the genital tract without an examination of that tract. The two things are often inextricably mixed, so that sometimes we have a strong prostate overcoming a weak brain, although if the brain is sound it will usually take care of the diseased prostate.

DR. J. F. PERCY, Galesburg, Ill.: I am sure that every practitioner of experience has encountered these cases, and it is possible that you will meet with more of them now since your attention has been called to this factor. If phrenitis prostatica does not quite answer in the way of nomenclature, will not Dr. Moyer give a term that is just right? I have tried to get a term that seemed more correct than "phrenitis prostatica," but a friend, an eminent Greek scholar, after reading my paper, gave me this title, with the assurance that it was entirely correct.

REPORT OF THE COMMITTEE FOR THE STUDY OF THE RELATION OF TUBERCULOSIS TO DISEASES OF THE EYE*

WILLIAM H. WILDER, M.D.
Chairman of the Committee
CHICAGO

This committee was formed for the purpose of studying in a cooperative way the relation of tuberculosis to certain diseases of the eye, the etiology of which is often obscure.

As was stated in the preliminary report, it was thought that a number of observers might accumulate enough data to draw conclusions that might not be warranted by the limited observations of a single individual.

Those who were interested in this work agreed to study their cases acording to a plan that was prearranged, and to keep records on blanks prepared for the purpose, so as to facilitate compilation.

This plan of study contemplated a thorough physical examination of the body to determine, if possible, the etiology of the eye disease. If, in this examination, no reasonable etiology could be determined, other than that the patient gave evidence of having either active or quiescent tuberculosis in some part of the body, it would be strong presumptive evidence that tuberculosis played some rôle in the causation of the eye disease.

Unfortunately, it is difficult to control clinic and dispensary patients as one would like; and it is also difficult to exclude syphilis, blood conditions, autointoxications and other factors, in order to get perfectly definite results in such a problem. But if we can place any reliance in the tests that have been proposed by Koch, Wolff-Eisner, Pirquet and Calmette, it is not difficult to determine whether or not a person is tuberculous, even in the absence of well-defined physical signs.

It is one thing, however, to show that an individual is tuberculous and quite another to prove that the lesion of the eye that he has is tuberculous; and yet, while there may be lacking the positive proof, the presumptive evidence may be strong.

Such is the case when, in addition to the general reaction from the subcutaneous injection of tuberculin, there appears a reaction in the affected eye, manifested by a conjunctival or ciliary injection or an aggravation of the original trouble. This has been done in many cases, when feasible; in many of them we had to rely on the physical examination or the simpler cutaneous test of Pirquet.

There has been a growing distrust and fear among ophthalmologists of the use of the conjunctival test, proposed by Wolff-Eisner and Calmette, that I think is not altogether well founded.

Most of the members declined to make use of the Calmette test in this study, because they consider it dangerous. It is true that certain ill effects from the use of tuberculin in this way have been observed, and the alarm has been sounded by several oculists of note, but I am inclined to think the reason for the bad results is that the solution has been used too strong at first. It is as necessary to know just what strength one may use with safety in the conjunctiva as it is to know what dose one may safely administer subcutaneously.

Within the past year I have made observations in a number of cases of eye disease that I had reason to believe were tuberculous in nature, and found that not only did the patients tolerate tuberculin administered in the eye in small doses, gradually increased, but they actually improved as I approached the dose that would excite a mild reaction. To be on the safe side, the first dose would be 1/1000 mg., gradually increased until in some cases 1/10 mg. would be employed, a dose nearly equal to that ordinarily employed in the Calmette test.

These cases will be made the subject of a personal communication later, after further observation and study.

The following members of the committee have submitted records of cases that are included in this report: Drs. George S. Derby (Boston), Charles Stedman Bull, Arnold Knapp (New York), W. C. Posey, George E. de Schweinitz (Philadelphia), Harry Friedenwald (Baltimore), L. W. Dean (Iowa City), and W. H. Wilder.

For various reasons, other members of the committee were prevented from engaging in the work, so that the showing is not so large as we had hoped to have it, but altogether we have 144 cases to report that have been studied with a view to determining whether tuberculosis played any rôle in the etiology. These cases have been classified as follows:

Blepharitis	3
Dacryocystitis	5
Follicular conjunctivitis	5
Phlyctenular disease of conjunctiva and cornea	47
Scrofulous pannus	4
Keratitis (deep and nodular)	12
Interstitial keratitis	18
Episcleritis	4
Scleritis	3
Sclero-keratitis	22
Chronic iritis	3
Chronic iridocyclitis	1
Uveitis	6
Chorioiditis	3
Chorioretinitis	3
Total	144

BLEPHARITIS

BULL: CASE 1.—Boy, aged 4; in upper right lid a small nodule appeared, which increased in size to that of a small pea and became red and painful; no enlarged glands; lungs and other parts normal. Von Pirquet test negative after three trials. Subcutaneous test, decided general reaction; temperature 100.4 F.; no local reaction.

CASE 2.—Girl, aged 15, had a small nodule in middle of lower right lid that extended into conjunctiva, ulcerated and bled easily. Von Pirquet test negative; subcutaneous test positive. Temperature 100.2 F.

These cases were regarded as tuberculosis of the lid.

WILDER: Girl, aged 6, with blepharitis ulcerosa. Tonsils enlarged, adenoids present, superficial lymph glands enlarged. Reason to believe that child was tuberculous, but three v. Pirquet tests negative.

DACRYOCYSTITIS

WILDER: CASE 1.—F., aged 19; fistula in tear sac. Lymphadenopathy. Marked reaction to v. Pirquet test.

CASE 2.—F., aged 9; chronic dacryocystitis; appears tuberculous. Pulmonary examination negative. Three v. Pirquet tests negative.

FOLLICULAR CONJUNCTIVITIS

WILDER: Five patients, ranging in age from 1½ to 15 years. In all these cases perceptibly enlarged lymphatic glands. In all pulmonary examination negative; v. Pirquet test positive in three and negative in 2.

PHLYCTENULAR CONJUNCTIVITIS AND KERATITIS

DERBY: Eleven patients, 9 under 14 years of age, 1, 28 and 1, 30. In 8 unmistakable clinical signs of tuberculosis; 5 of the lungs, 1 of the spine, 1 of the knee and spine, and 1 of the

* Read in the Section on Ophthalmology of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

skin. The other 3 cases showed signs of scrofula in enlarged glands. Five cases showed a positive and severe reaction to v. Pirquet test; in the other 6, test not made, the evidence being so strong that they were tuberculous. Patients were treated in the tuberculous class.

WILDER: Thirty-six patients with phlyctenular disease of the cornea and conjunctiva, ranging in age from 2 to 21 years, only 5 being over 14 years. Of the 36, 7 showed signs of active or quiescent pulmonary tuberculosis, 1 had history of tuberculous spine and showed kyphosis. With two exceptions, a well-nourished child of 7 years and a woman of 21, all had enlarged superficial lymphatic glands varying in degree. All but 4 of the 36 reacted positively to the v. Pirquet test. In one of these, a healthy boy of 8, with only slight adenopathy, and a phlyctenular conjunctivitis of right eye, two Calmette tests were negative and three v. Pirquet cutaneous tests were negative. In a woman, aged 21, with good history and no enlarged glands, two v. Pirquet tests were negative. In 2 other cases, a woman of 20 and a girl of 3, one test was negative, although there were evidences of scrofula in both of them. Possibly, if the patients had returned for repeated tests, the reaction might have been positive.

In this category may be included the cases denominated scrofulous pannus, in which extensive phlyctenular disease involves large areas of the cornea, and is very obstinate to treatment.

Four of these cases were studied, of which none showed pulmonary lesions, but all had marked lymphadenopathy and responded positively to the Pirquet test with severe reaction. One of these, a colored woman of 28, with an obstinate extensive phlyctenular keratitis of five months' duration, improved remarkably with tuberculin dropped into the eye in graduated doses.

Summary.—Fifty-one cases of phlyctenular disease of the cornea or conjunctiva, or both; 47 at least showed distinct evidence of tuberculosis, either in a quiescent or an active form.

INTERSTITIAL KERATITIS

Only those cases were considered in which with reasonable certainty syphilis could be excluded; 18 such cases were studied.

DE SCHWEINITZ: In a girl of 18, with bilateral interstitial keratitis, a general reaction was obtained and also a local eye reaction after subcutaneous test with tuberculin.

DEAN: In 2 patients examined, 14 years and 46 years, one showed a positive v. Pirquet, the other was negative. Neither responded to general test.

KNAPP: Three patients, 11, 18 and 23 years, all reacted to subcutaneous test, and two showed a local reaction in the affected eye, in the increased ciliary injection, or aggravation of the symptoms. The one who showed no local reaction, but a distinct general reaction, with temperature of 101 F., improved decidedly on antisyphilitic treatment. The Wassermann test was not made.

DERBY: Seven patients, ranging in age from 16 to 36 years. Five showed marked general reaction to subcutaneous test with tuberculin, with local reaction in the affected eye. This local reaction was an aggravation of the symptoms of mild degree, but was considered positive by the observer.

In one case, a girl of 16, with bilateral keratitis interstitialis, there was a quiescent tuberculous process in both apices. Wassermann test was negative, but patient gave no response after two trials of the v. Pirquet test. Dr. Derby concludes, however, that the case is tuberculous. In the other case, a girl of 19, there was tuberculosis of both apices, old tuberculosis of cervical glands, and yet the v. Pirquet test was twice negative.

WILDER: Five patients, ranging in age from 6 to 25 years. Four showed distinctly positive reaction to v. Pirquet test. One who reacted negatively on first examination was a delicate child of 8, with scrofulous glands and a suspicion of beginning pulmonary trouble, and did not return for further examination. Two of the patients tested with tuberculin subcutaneously showed general reaction and a slight reaction in the affected eye.

Summary.—Eighteen patients; 11 showed general reaction to subcutaneous test; 3 others showed positive v. Pirquet test. In the 4 who were negative to v. Pirquet, tuberculosis was thought to exist in 3 of them from clinical examination. Of the 11 who showed reaction to the subcutaneous test, 9 showed a local reaction in the affected eye, evidenced by increased ciliary injection or an aggravation of the conditions.

KERATITIS

Of other forms of keratitis suspected of being of tuberculous origin, 12 cases have been studied.

DE SCHWEINITZ: A man of 25 years, with nodular opacities in the anterior layer of the cornea, reacted to subcutaneous test with local reaction in affected eye. Tuberculin treatment seemed to relieve him, but vision was not improved.

DERBY: Eight patients, ranging in age from 10 to 49 years, in whom there were nodular infiltrates in the cornea, several in the deeper layers, and in 3 combined with nodules in the iris. In 4 of these patients there was evidence of pulmonary tuberculosis, in 2 others a family history of tuberculosis, and in 2 no pulmonary involvement or noticeable lymphadenopathy. In all of these cases but one there was positive and marked reaction to the v. Pirquet test. This patient, a man of 32, with kerato-iritis, had nodules in the cornea and one in the iris angle that looked tuberculous. Pulmonary examination was negative; no lymphadenopathy.

WILDER: Two patients. Woman, aged 27; no pulmonary trouble; fair health; deep nodules in cornea; v. Pirquet test positive. Man, aged 40; fair health; evidence of old tuberculous trouble in each apex; nodules in superficial layer of cornea that broke down and formed small ulcers; v. Pirquet test positive. Subcutaneous test gave marked general reaction and local reaction in affected eye. Scrapings from ulcers showed no bacilli and cultures were negative. Tuberculin dropped in conjunctival sac, in graduated doses, followed by healing of ulcers and fair clearing of the cornea.

BULL: Woman, aged 19, frail, anemic, some enlarged glands. Infiltration of inferior segment of cornea, with small, yellowish nodules, and thickening and nodular elevation of adjacent conjunctiva. Pulmonary examination was negative; v. Pirquet test positive, with increased temperature. Subcutaneous test gave general reaction and temporary aggravation of condition of eye.

Summary.—Of 12 cases of nodular keratitis, 11 showed evidence of tuberculosis. In 5 pulmonary tuberculosis was demonstrated. In 3 tested subcutaneously there was general reaction, with local reaction in the affected eye.

EPISCLERITIS

DEAN: Woman, aged 26, in fair health, developed episcleritis in right eye two days after conjunctival test with tuberculin, but, according to the observer, independent of it. Von Pirquet test was positive, subcutaneous test positive; temperature 102 F. after 1 mg. of tuberculin.

WILDER: Three cases. Case 1.—F., aged 18. Father died of pulmonary tuberculosis. Slight apex lesion; cervical glands enlarged; right eye affected for seven months with a nodule in episclera on temporal side; v. Pirquet test positive; Calmette test in other eye positive. Treatment with tuberculin in conjunctival sac, maximum dose being 7/1000 mg. Recovery.

CASE 2.—F., aged 36; fairly healthy; lungs negative; episcleral nodule on temporal side of right eye; v. Pirquet test positive.

CASE 3.—M., aged 24; fairly healthy; superficial glands enlarged; episcleral nodule in temporal side of left eye for six weeks. Von Pirquet test positive and marked; greatly improved by tuberculin injection in conjunctival sac; maximum dose, 5/1000 mg.

Summary.—Four cases, of which 1 showed evidence of pulmonary tuberculosis, 1 responded to subcutaneous test, 2 responded to v. Pirquet test.

SCLERITIS AND SCLEROKERATITIS

BULL: Two cases of scleritis in patients of 5 and 12 years. In each there was a nodule in the sclera, about 8 or 10 mm. in diameter. In one the conjunctiva over the scleral nodule had ulcerated; no organisms were found in the scrapings. There was some lymphadenopathy, but no pulmonary lesions. Subcutaneous test in each case was positive, and in the affected eye there was an increase of vascularity.

KNAPP: One case of deep scleritis in one eye in a patient of 27 years; no enlargement of glands or pulmonary trouble. Subcutaneous test gave positive reaction, and a little more redness of the bulbar conjunctiva.

DE SCHWEINITZ: Three cases of typical relapsing sclerokeratitis in adults, in all of whom the v. Pirquet test was positive, and in two of which brilliant results were obtained with tuberculin treatment.

FRIEDENWALD: One case. F., aged 18; sclerokeratitis with iritic complication; suspicion of pulmonary lesion at apex.

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Von Pirquet test was positive; subcutaneous test positive; good result from tuberculin treatment.

POSEY: Two cases of sclerokeratitis in persons, 33 and 28 years of age, in good health; no glandular or pulmonary involvement. In both v. Pirquet test was positive; in both subcutaneous test was positive and in one there was pronounced local reaction in affected eye; good results from tuberculin.

DERBY: Fifteen patients ranging in age from 24 to 50, in 4 of whom the iris was involved. Seven gave physical signs of pulmonary tuberculosis, and in most of these there were also signs of tuberculous glands. In 8 physical examination was negative, except slight lymphadenopathy in 2. In 9 cases, the v. Pirquet test was made and was positive. In 5 in whom a subcutaneous test was made it was positive, and all except one of these were in persons who showed no physical signs of tuberculosis except slightly enlarged glands in 2. In 3 of these 5 cases of positive subcutaneous reaction there was also a pronounced reaction in the affected eye; in the other 2 the administration of a therapeutic dose of 6/100 mg. caused a light general reaction as well as a mild reaction in the affected eye.

WILDER: One case, a woman of 23, with enlarged glands, but no pulmonary involvement. Von Pirquet test was positive; Calmette test in sound eye was positive; subcutaneous test, 3 mg. caused marked general reaction, with slight reaction in affected eye. The patient, who had suffered for months, improved remarkably after use of tuberculin in increasing doses in the conjunctival sac, the maximum dose reaching 1/10 mg.

Summary.—Twenty-five cases of scleritis and sclerokeratitis, in 8 of which physical examination showed signs of pulmonary tuberculosis. In 12, the subcutaneous test was made and was positive, and in 10 of these there was reaction in the affected eye, manifested by an increased redness or a distinct aggravation of the condition. In the 13 remaining cases all but one gave evidence of the existence of tuberculosis by a positive Pirquet reaction. In 9 cases it is noted that marked improvement followed the use of tuberculin.

CHRONIC IRITIS

BULL: F., aged 15; previous history of iritis one year before. Left eye shows three nodules in iris, one larger than the other; post-synechiæ. Glands in neck enlarged; pulmonary examination negative; v. Pirquet test positive, with temperature increased to 100 F. Subcutaneous test positive, 101.6 F., with local reaction in eye.

WILDER: Case 1.—M., aged 37. Had repeated attacks of iritis in each eye. R. V. = fingers three feet. Severe iritis. L. V. = 20/40 +. L., post-synechiæ. Von Pirquet test positive; subcutaneous positive; reaction in eye questionable. Treated with tuberculin in conjunctival sac, with increasing doses, reaching a maximum of 1/10 mg. Improvement of condition of right eye and vision reached 20/200.

CASE 2.—F., aged 8; chronic iritis of right eye for one year. Fifteen months before she was seen, eye had been struck by a stick, but without a penetrating injury. Marked lymphadenopathy; marked v. Pirquet reaction, with a general reaction; no noticeable change in eye.

Summary.—Three cases of recurrent iritis, all of which gave evidence of existence of tuberculosis.

CHRONIC IRIDOCYCLITIS

DEAN: Case 1.—Male, aged 25; iridocyclitis and anterior chorioiditis; no enlargement of glands; pulmonary examination negative. Positive Calmette test; positive subcutaneous test after 5 mg. of O. T.; temperature 103.6 F.; marked reaction in affected eye, lasting three weeks; no improvement with tuberculin.

CASE 2.—Adult male; chronic iridocyclitis in right eye; left eye lost from previous attacks of inflammation. R. V. = F. 1 m. Glands negative; pulmonary examination negative; v. Pirquet test positive and severe; subcutaneous injection positive. Eye seemed to improve after 3 mg. and 5 mg. injections. After eight months of treatment with tuberculin, R. V. = 6/8.

CASE 3.—Female, aged 24; severe pain in right eye; V. = P. 1. Left eye was removed at age of 16 from result of an injury in childhood. Glands not enlarged; lungs normal; v. Pirquet test negative; subcutaneous test negative, 5 mg.

CASE 4.—Chronic iridocyclitis, and keratitis bullosa of right eye in adult male. Cataracts had been extracted 14 years before. R. V. = fingers, 6 inches. Von Pirquet negative; subcutaneous test negative.

KNAPP: Male, aged 17. Mother died of pulmonary tuberculosis. Iridocyclitis of left eye; L. V. = 15/200; slight lymphadenopathy; slight involvement of lung. Subcutaneous test positive; temperature, 100.4 F.; no reaction in eye.

WILDER: Case 1.—Female, aged 30; frail woman; rheumatic history. Numerous deposits on back of each cornea; gradual failure of vision and distress in eyes. Subcutaneous test, 3 mg., gave distinct general reaction and slight reaction in right eye; no marked improvement of vision under tuberculin treatment.

CASE 2.—Male, aged 19, chronic iridocyelitis of left eye. Injury of eye 10 years before, from which he recovered with good sight; gradual failure of vision, with precipitates on back of cornea; opacities in vitreous; general condition good; pulmonary examination negative. Von Pirquet test positive; subcutaneous test, 1 mg., positive; temperature 102 F., with local reaction in affected eye. Vision gradually failed; tuberculin treatment ineffective.

Summary.—Seven cases of chronic iridocyelitis and anterior chorioiditis, in only 1 of which was there evidence of pulmonary tuberculosis. In 5 there was general reaction to tuberculin subcutaneously and in 3 of these slight reaction in affected eye.

UVEITIS

BULL: Male, aged 30, anemic; iris swollen and discolored; post-synechiæ; opacities in vitreous of two months' duration; no pulmonary disease; glands normal; v. Pirquet test positive; subcutaneous test positive; temperature 102 F. In eye all symptoms were increased in severity.

DE SCHWEINITZ: Female, aged 22; relapsing uveitis, very suggestive of tuberculous origin. Tests for tuberculosis were entirely negative. Subsequent treatment along the line of intestinal autointoxication was most successful.

WILDER: Four cases. Case 1.—Male, aged 23; general health good; enlarged lymph glands in neck; no pulmonary trouble; recurrent attacks of dimness of vision of right eye; post-synechiæ; vitreous opacities. R. V. = 14/200. Later this fell to perception of light. Subcutaneous test positive; temperature, 101.6 F.; reaction in eye. Continued tuberculin treatment improved condition, so that V. = 20/40.

CASE 2.—Female, aged 40; fair health; in both eyes uveitis with iritis; old patches of chorioiditis; recurrent attacks of redness of eyes and dimness of vision; at times precipitates on back of cornea. Subcutaneous test, 5 mg., general reaction, with no local reaction in eyes.

CASE 3.—Male, aged 49; good general health; uveitis in both eyes, began in right four years before; vitreous opacities, followed by detachment of retina and blindness; failure of vision of left eye, V. = 14/200; no iritis, but numerous opacities in vitreous. Von Pirquet test positive and marked; subcutaneous test, 3 mg., positive; general reaction and local in eye. Treatment with tuberculin relieved for a time.

CASE 4.—Female, aged 62; fair general health; pulmonary examination negative; history of general uveitis in both eyes, with iritis, vitreous opacities and gradually increasing opacities of the cornea; v. Pirquet test positive; no subcutaneous test.

Summary.—Six cases of general uveitis, with no physical signs of tuberculosis. Four cases gave positive reaction to subcutaneous test, with local reaction in affected eye in 3.

CHORIOIDITIS AND CHORIORETINITIS

DE SCHWEINITZ: Male, aged 18; relapsing chorioiditis and vitreous hemorrhages; negative v. Pirquet test; marked intesinal autointoxication and relief from treatment along this line.

POSEY: Male, aged 25; family history negative; fair health; signs of old tuberculosis in left apex. Right eye: hazy vitreous; descemetitis; yellowish mass in chorioid; subcutaneous test positive; temperature, 102 F. Local reaction could not be ascertained on account of inflammatory condition. Tuberculin treatment and general measures resulted in cure. V. = 5/20.

DEAN: Male, aged 21; good health; right eye lost in infancy from chorioiditis; left chorioiditis for six months. v. Pirquet test positive; no subcutaneous test used.

KNAPP: Three cases. Case 1.—Male, aged 29, with disseminated chorioiditis in both eyes; no family history; pulmonary examination negative; no enlarged glands; disseminated patches of chorioiditis in each fundus; lowered vision. Subcutaneous test positive, 1 mg.; temperature, 104.2 F., with ciliary injection in each eye.

CASE 2.—Adult male, in good physical condition; family history negative; chorioiditis exudativa in right eye; V. = 10/200; post-synechiæ; shallow retinal detachment. Subcutaneous, 1 mg.; general reaction; temperature, 104 F.; and conjunctival and ciliary injection.

CASE 3.—Male, aged 15; no pulmonary signs; no gland enlargement; in macular region of both eyes, large areas of chorioidal change. R. V. = 20/200; L. V. = 12/200. Sub-

cutaneous test, 5 mg.; temperature, 101.8 F.; positive; no reaction in eye.

DE SCHWEINITZ: Girl, with form of retinal disease, with extensive exudate, simulating tuberculous disease; subcutaneous test negative.

WILDER: Female, aged 18, failure of vision of both eyes at age of twelve; fair health; no evidence of syphilis; chorioretinitis in each eye; media normal. R. V. = 10/200; L. V. = 5/200. Von Pirquet test three times negative.

Summary.—Six cases of chorioiditis, in 4 of which subcutaneous test gave a positive general reaction, with local reaction in the eye in 2. Two cases of retinitis or chorioretinitis, in which tuberculin tests were negative.

In trying to arrive at some definite conclusions as to etiology in a group of cases like the foregoing, one should consider carefully the relative value of the means and tests employed in the examination of such cases. If active tuberculosis is present or has been present in lungs, joints or bones, sufficient to cause any marked changes, the condition may be discovered with all reasonable probability by careful physical examination. But if from 90 to 98 per cent. of all persons who have reached 60 years of age have been at some time infected with tuberculosis, as is claimed, then very many have suffered so slightly as not to present signs of the disease that can be determined during life by our methods of physical examination.

If from 90 to 95 per cent. of all persons who have passed the adolescent period of life will respond actively to the sensitive cutaneous test of v. Pirquet, as is claimed, it helps to confirm the statements of the pathologists as to the ubiquitous nature of the disease. This being so, in a given case of eye disease, one could place little reliance on this test as determining the actual etiology of the eye lesion without first positively excluding all other factors, and this is not always possible.

The same criticism would apply to the Calmette test which, on account of its danger in diseased conditions of the eye, one would hesitate to use for ophthalmic diagnosis, even if one eye were sound. Response to this test might prove, as is claimed, the existence of active tuberculosis in some part of the body, but would not necessarily determine the nature of the eye lesion.

In the test by subcutaneous injection of tuberculin, the same difficulties are encountered. A general reaction following this test would only prove that the individual is tuberculous (excluding syphilis, leprosy, actinomycosis), which might be done by the simpler v. Pirquet or Calmette test. If, however, a local reaction in the diseased eye occurs, manifested by ciliary injection, conjunctival redness, or marked aggravation of the previous condition, we have strong presumptive evidence that the lesion in the eye is tuberculous. But the eye may be so inflamed as to prevent us from observing whether or not there is increased reaction, so that the test, if made, should be made when the eye is in a comparatively quiet condition.

Again, this raises the important question whether such structures as the cornea, sclera and uvea may not be thrown into a diseased condition by the toxic substances from the bacilli in a distant focus of tuberculosis, reaching them through the blood and lymph channels, without the presence of the micro-organisms themselves in any part of the eye. This being the case, might we expect a local reaction in the eye, even if we encountered a general reaction with the subcutaneous test?

An interesting feature of this series of cases is the frequency of association of tuberculosis in some part of the body with eye conditions, such as phlyctenulosis, deep and interstitial keratitis (non-syphilitic), and sclerokeratitis, and the frequency of local reaction in the eye in such cases, with the use of the subcutaneous test.

In 59 cases of keratitis, episcleritis, scleritis and sclerokeratitis, 56 gave positive evidence of being tuberculous, either by physical examination or tuberculin tests. In 27 of these cases subcutaneous tests were made, and of these 22 were positive as to local reaction in the eye.

If it were possible to study all such cases that appear in a year or two in several large clinics or eye hospitals, we might arrive at some instructive conclusions as to the frequency of tuberculosis as a cause of such diseases.

ABSTRACT OF DISCUSSION

DR. JOHN GREEN, JR., St. Louis: I observed that, under the heading "keratitis," reference is made to "nodular" keratitis, "nodular" infiltrates, etc. In the summary, Dr. Wilder speaks of twelve cases of "nodular" keratitis, in which eleven showed evidence of tuberculosis. It seems to me that the term, "nodular," in connection with tuberculous corneal opacity, should be abandoned, in view of the fact that "nodular," qualifying "keratitis" or "opacity of the cornea," has come to possess a very definite clinical significance. Groenouw has used the term "nodular" in describing a peculiar chronic affection of the cornea, characterized by the presence of discrete subepithelial masses in the central portion of the cornea, and the term has been applied by subsequent writers in describing this condition. The disease is extremely rare, there being less than fifty cases in the literature, and in less than ten of these has there been found any evidence of tuberculous origin. Confusion is bound to arise if cases such as are described in the report, which bear no relation to "nodular" keratitis or to "nodular" opacity of the cornea, are nevertheless designated as "nodular."

A CASE OF EPISTAXIS

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The article about epistaxis in THE JOURNAL, April 30, induces me to relate the following case:

On March 25 a 19-year-old boy consulted me for very severe headache. About two weeks previously he had influenza and four days previously his head began to pain him, so that sleep was impossible; his nose began to run at the same time. Percussion on the left frontal sinus was painful; also pressure in the left upper inner orbital corner. The left middle turbinate was swollen and, after depletion by cocain and epinephrin (adrenalin), pus came from below and above the turbinate. My diagnosis was left frontal sinusitis and ethmoiditis. The symptoms had not improved markedly the next day, so I removed the middle concha. No abnormality was noticed, the headache was controlled, and packing removed the following week. Eight days after the operation slight nosebleed occurred, but the cotton plug soaked in hydrogen peroxid solution stopped it entirely. Three days later all packing was removed, and the patient told to keep quiet. In the night of April 6 the patient suffered from a profuse hemorrhage. His family physician and a colleague gave atropin subcutaneously, but were unable to control the bleeding, even after tamponing the posterior nares. On my arrival I found the amount of blood lost considerable, and becoming alarming. I removed the posterior tampon as it only caused irritation and the place from which the bleeding came was in the anterior part of the nostril. But plugs soaked in hydrogen peroxid had no effect; epinephrin had been used before without success. No drugstores were open during that night. The only calcium preparation at hand was calcium chlorid, which we gave liberally. The only effective means proved to be keeping the patient as quiet as possible and plugging the nostrils with ordinary non-absorbent cotton, which contains fat (suggestion by Dr. Hengerer), soaked in mercuric chlorid solution. Dr. Scott Renner, who was asked to come, found the bleeding stopped and ordered morphin subcutaneously.

The patient was transferred to the hospital early in the morning, and made a good recovery, so that four days later all plugs were removed; the patient was kept in bed thirty-six hours afterward; a new hemorrhage started, without a known cause, and the patient lost about one liter of blood before I could reach him. Tampons with a solution prescribed by Dr. Renner (equal parts of antipyrin, 10 per cent. aqueous solution, and tannic acid, 10 per cent. spirituous solution) proved successful. The patient left the hospital three weeks after the first severe nightly hemorrhage. We have given him calcium lactate, which has been recommended for adenoid operations and tonsillectomy, and which, in the cases in which I have used it, seemed to make the blood more coagulable and the bleeding less abundant.

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A remedy which was not used in this case, but which I find advocated by Dr. R. Lenzmann* is serum, as this contains the substances which bring on the coagulation. As plain serum cannot be had generally, antitoxin serum should be used with as low a quantity of "units" as possible.

This kind of nosebleed is due to an opening of an artery; it is therefore clear that epinephrin will do harm by raising the pressure in the smaller peripheral arteries and capillaries.

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HYPEREMIA TREATMENT IN INFECTIONS OF THE BREAST

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A previous communication[1] was devoted to the use of hyperemia as applied to the various forms of infection, such as boils, carbuncles, bone-felons, etc., usually seen in a surgical dispensary. Since that time this method of treatment has been continued along the same lines and with the same uniform success. But perhaps the most striking and gratifying results have been obtained in infections of the breast, and it is these that I wish to report now.

All grades of infections were treated, ranging from those of such severity that the patient was almost prostrated, down to the simple, but at times painful, caked breasts. Indeed, several patients were truly fit subjects for the hospital, but their absolute refusal to avail themselves of the privilege of the wards compelled us to treat them in the out-patient department.

The routine treatment is about as follows: When the patient is seen early in the disease and pus formation has not occurred, cupping is at once instituted for from fifteen to forty-five minutes daily, the breast between treatments being put up in a wet boric dressing, and nursing from it stopped. Abscess formation can frequently be prevented in such cases.

Unfortunately, however, most patients do not present themselves until an abscess has already formed and not infrequently ruptured. Wide incision is practiced in such cases, the patient being under ether or nitrous oxid. All pockets of pus are broken up with the finger and where necessary counter-radial incisions are made, followed by through-and-through drainage for twenty-four hours, with iodoform gauze. This is contrary to the usual rules of hyperemia treatment, in which drains are dispensed with, but the hemorrhage is rather profuse following incision, and, inasmuch as all our patients are ambulant, we have packed, more to avoid postoperative bleeding than for anything else.

In one or two instances I have used the cup immediately after the operation and with the patient still on the table, but in the severe cases this caused a considerable loss of blood and so much discomfort to the patient that now hyperemia is not instituted until twenty-four hours later.

At this time, with the drain still *in situ*, a cup at least 1 cm. larger than the entire breast is applied. A very moderate degree of suction is at first used—that is, a degree that causes no pain, only a slight blushing of the skin and very little bleeding. This is continued for about five minutes, then the cup is removed and the breast allowed to rest for about two minutes, following which the cup is again applied. This alternate cupping and resting is kept up until actual hypermia has been instituted for about fifteen to forty-five minutes, varying according to the condition of the patient, the condition of the breast, the pain and the bleeding, which is apt to be rather free at the first treatment.

The drains are usually firmly adherent at first, but if they are left in place during two or three cuppings, they become loosened by the flow of pus, milk and blood, and are then very easily removed, when the treatment is resumed. In cases in which they do not come away without much pain they are left until the following day.

It sometimes happens that the very large cup does not draw away the pus. In such instances the application of a small cup for a few minutes will have the desired effect, although if it is judiciously applied, severe pain may be caused. At the end of the treatment, a strip of wet boric gauze is loosely tucked in the mouth of the wound—simply to prevent closure—and the whole breast is put up in wet boric gauze, over which is placed a very loose bandage, thus allowing the breast to hang low, so that drainage by gravity will occur. The patient is now treated every day, occasionally twice a day, every two or three days, then every four or five days, until the process is healed.

It will thus be seen that this treatment differs in several respects from the rules laid down by Bier and his followers in the handling of these cases. Where they advise a small incision, we open widely. The small puncture is effective in the superficial abscesses, but in the deep, we have found that unless a generous incision is made, followed by breaking into all the pockets, and occasionally counter-incisions, one or more secondary operations are liable to become necessary.

Where the puncture wound is practiced the pack is unnecessary. Its use is self-evident, however, in the more radical operation, and we have discovered, much to our embarrassment, that the continued use of a loose pack just in the mouth of the wound is advisable.

In the old method of handling abscesses of the breast, tight bandaging was thought essential—in order to prevent milk-formation. Our patients have all been much more comfortable and we have had far better drainage since the loose bandage has been used, the breast being allowed to hang free. But aside from this, we believe it wise to continue the lactation, and as the cup aids in this, several (four) of our patients have been able to resume nursing on the affected breast after its restoration. No ill effects have resulted from this procedure, either to the child or to the mother, and we consider it an advantage, rather than a disadvantage.

When patients have been treated outside and have come in with a persistent sinus, the sinus has been laid open and packed twenty-four hours, following which the usual treatment has been instituted.

Lack of space prevents the publishing of individual case reports. It must, therefore, suffice to say that in the fifteen cases in which hyperemia has been used, the average duration of the disease, or rather the average duration of the infection, has been 19 1/3 days. The average number of treatments (cuppings) has been 7 1/5. Thirteen of the cases were in nursing mothers and four of these were able to resume nursing on the

*Lenzmann, Richard: Die Leben gefährende Krankheitszüstande, Ed. 2, 1909, p. 131.

1. Bernheim, B. M.: Passive Hyperemia by Means of the Cupping-Glass of Bier and Klapp, THE JOURNAL A. M. A., March 14, 1908, p. 840.

affected breast following its restoration. Only one patient has required secondary operation, and that being one of the earliest treated by the method was the result of inexperience.[2] Eleven of the fifteen patients came in with an abscess already fully developed. One came in with a sinus following an abscess, one with a chronic mastitis and two presented themselves early enough in the course of the infection to enable us to entirely prevent abscess formation.

The advantages then of this method are: (1) almost absolute freedom from pain during the whole course of the disease; (2) better preservation of the gland function, both for present and future lactations; (3) the minimum of scar-formation; (4) shortening the course of the disease, and (5) prevention of abscess formation in cases seen early enough.

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EXPERIMENTAL STUDY OF BACTERIA ISOLATED FROM TONSILS*

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Work on the bacteriology of the tonsils has largely been confined to the examination of swabs and smears made directly from the surface of the tonsils *in situ*. This surface is necessarily contaminated by bacteria from the mouth, throat, nose, food, etc., and the great variety of bacteria reported to have been found here is thus at least partly explained. It is evident, too, that the bacterial flora on the surface may be very different from that in the crypts. The present study, therefore, was made before and after excision of the tonsils and a comparison made of the bacterial flora of the surfaces and in the depths. The tonsils, usually enlarged, were obtained from patients with a variety of clinical conditions, including chronic joint affections, nephritis, endocarditis, rheumatic fever, recurring tonsillitis, etc. The detailed facts are reserved for later publication.

Tonsils from forty-five patients have been examined. The excised tonsils were at once placed in a sterile receptacle and taken to the laboratory where smears and blood-agar plate cultures were made first from the surface. The tonsil was then incised with a hot sterile knife, thus exposing the crypts and from these similar smears and cultures were made. In many cases anaerobic cultures were also made. In almost every case a pure growth or a nearly pure growth of *Streptococcus pyogenes* was obtained from the crypts. This was true regardless of the clinical condition of the patient. From the surface of the tonsils the flora, as a rule, was strikingly different from that in the crypts. The predominating organisms on the surface belong to the pneumococcus group, all producing green colonies on blood-agar and some, but not all, being inulin fermenters. In many cases streptococci were also present on the surface but they were relatively few even when the crypts contained them in large numbers. In some cases examination of swabs taken from the surface of the tonsils just before tonsillectomy gave results similar to those obtained afterward. Not infrequently pneumococcus-like colonies were obtained from the depths of the tonsils in considerable numbers, but as a rule the number was in more or less direct proportion to the tissue laceration and contamination of the depths of the tonsil by surface organisms.

Anaerobic cultures gave, as a rule, few organisms and none of the varieties found occurred with any degree of constancy or appeared to be significant. In two cases a practically pure growth of *Staphylococcus albus* was obtained from the crypts. In most cases staphylococci were not present at all, or only an occasional colony occurred on the plates. Occasionally long thread-like bacilli were seen in smears; these were not cultivable. In one case of recurrent tonsillitis, the last attack being four weeks previous to the tonsillectomy, cultures from the crypts gave a nearly pure growth of *Bacillus diphtheriæ*, while cultures from the surface of the tonsils taken both before and after excision did not reveal this organism. There is good reason to believe that an outbreak of several cases of diphtheria, occurring at this time in persons closely associated with this patient, may be thus explained. This case, therefore, is an example of a diphtheria-carrier in which the bacilli were present in the tonsillar crypts and were not revealed by the ordinary method of examination. All strains of streptococci were tested on dextrose, lactose, mannite, raffinose and inulin. All fermented dextrose and none fermented raffinose and inulin. A large number of the strains fermented lactose and a smaller number fermented mannite. They may therefore be divided into well-defined groups with reference to mannite and lactose fermentation. This grouping bears no evident relation to the clinical condition. Similar groups are observed in strains of streptococci isolated from other sources, which is in accord with the findings of others.

The virulence of the twenty-five strains of streptococci isolated from the tonsils was tested by intravenous injections into rabbits. Acute arthritis developed in nearly every instance, followed usually by death in from a few days to three or four weeks. The arthritis usually appeared from the third to the fifth day manifested by lameness and swelling of the joints. When large doses were given the arthritis usually was more general and appeared earlier, the animal soon dying of septicemia. The most suitable dose was the twenty-four-hour growth from the surface of one small blood-agar slant. A number of animals recovered, no trace of the joint lesions remaining. In three instances chronic lesions occurred, manifested by enlarged and deformed joints and exostoses about the joints. In a few cases one joint only was attacked, but as a rule the arthritis was multiple, in several cases involving nearly every joint in the body, including the vertebral joints. The various joints of the fore and hind limbs were about equally involved.

Post-mortem examinations revealed the fact that not infrequently in the early stages the involvement was periarticular, often involving the tendon-sheaths. Later the joint might become infected. The exudate in the joint early was usually gelatinous and slightly turbid, containing leucocytes and streptococci. This was frequently found when there was no external evidence of arthritis. Later the exudate became more purulent and even at times almost caseous in appearance. The streptococci were always readily recovered from the joint-fluid. In some cases, but not in all, they were isolated from the heart's blood and at times from the peritoneal cavity.

Multiple arthritis followed by death in two weeks was produced in a monkey (*Macacus rhesus*) by intracardiac injection of one of the strains of streptococci. In no case did endocarditis occur. The various strains of streptococci from the tonsils regardless of the clinical

* From the Memorial Institute for Infectious Diseases, Chicago.
2. The wound in this case was not kept open by the loose pack.

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condition of the patient appear to differ little in their power to produce arthritis in the animals inoculated.

The organisms of the pneumococcus group (six strains tested) in no instance produced arthritis in rabbits. An organism of this type, which produced green colonies on blood-agar-fermented inulin and which was isolated from the depth of the tonsil of a patient with multiple arthritis not associated with endocarditis, produced on intracardiac inoculation into a rabbit an extensive vegetative mitral endocarditis with typical large renal infarcts associated with septicemia. There were no joint lesions.

The cases examined were largely from the service of Dr. Frank Billings at the Presbyterian Hospital, to whom acknowledgment is hereby made for suggestions and privileges.

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AN ELECTRODE FOR THE IONIZATION OF SILVER, ZINC, OR COPPER IN THE TREATMENT OF CHRONIC URETHRITIS

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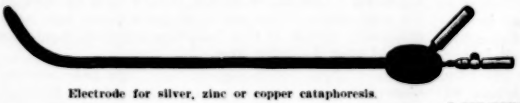
For some months I have been working on the ionization of silver, zinc, and copper, in the treatment of chronic urethritis, and believe that I have an electrode that will prove to be of benefit to those members of the profession who may be interested in this line of work.

I use a Neiswanger cataphoric electrode, made of hard rubber, with the tube closed at the lower end, bent to a proper urethral curve and perforated with small



Electrode for silver, zinc or copper cataphoresis.

openings for a space of 6 inches from the distal end. The electrode shown in the illustration is only perforated for about two inches. The proximal end is pushed into a head, also made of hard rubber, to which is attached a twisted wire of silver, the length of the tube, and connected to a socket for the cord-tip. To the side of the head is attached a small metal tube one inch in length, which communicates with the long perforated tube, and which is connected by rubber tubing to a glass syringe having a long tip and capable of holding an ounce of 1 per cent. silver nitrate solution.

With the patient on his back I lubricate the electrode with a lubricant consisting of 2 drams of gum tragacanth and four ounces each of liquor antisepticus (N. F.) and distilled water, and pass it down the urethra to the neck of the bladder, which grasps it.

Then, having the patient hold the end of the penis tightly about the electrode, I fill the urethra full of the silver nitrate solution, and, connecting the electrode socket to the positive side of the galvanic current, and having a large, well-moistened dispersive electrode on the abdomen connected with the negative pole, I turn on a weak current and gradually increase it to ten or fifteen milliamperes for ten minutes.

Some patients appear to do better on zinc and others on copper, and for these I use the same apparatus, only substituting a zinc or copper wire and a 1 per cent. sulphate solution or ½ per cent. copper sulphate solution as may seem best in the particular case.

The long perforated tube, being easily detachable from the socket head, can be cleansed more satisfactorily.

These applications are best made not oftener than every third day, and in the majority of cases will produce the desired result after not more than four or five treatments.

Clinical experience has taught me that the indications for the use of this method are, the "morning drop" with long, small, yellowish particles, some floating and others sinking in the urine; and those cases in which the urethroscope shows fine granulations.

RATIONAL TREATMENT OF BURNS*

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A burn is an injury to or destruction of tissue by heat, the rational treatment of which is based on certain definite principles which are too often partially or wholly ignored.

If the tissue is only injured or without positive cell destruction, such injured tissue must be protected from foreign or external matter until Nature can repair the injury. If there is positive cell destruction the tissue dies; this dead tissue must be thrown off, and the underlying delicate structure must be protected until new tissue can be supplied by natural processes or by transplantation of tissue by the surgeon.

When an area of the surface of the body is burned there is either a partial or a complete paralysis of the vasoconstrictor nerves, or a direct stimulation to the vasodilator nerves, either of which will produce a dilatation of the immediate blood-vessels, and a consequent congestion or hyperemia is produced. This is Nature's way of throwing up breastworks against any foreign invasion. There is an extravasation of the fluid part of the blood into the tissues to soothe the irritated nerve-endings. An army of phagocytes are rushed to the field of action to do or die, if necessary.

If the heat is more intense or prolonged its tendency is to destroy this protecting lymph by coagulating its albumin contents, thereby producing stasis in the capillary circulation; and gradual death of tissue is the result. If the thermic action is still greater there is charring of the tissues, causing immediate death of the parts.

A burn is a wound, and must be treated as such. It is not enough to find the cause and remove it; we must know the histology and physiology of the parts, as well as the pathologic condition. The epithelial covering of the skin does not exist alone as a surface epithelium, but dips down into all the glands of the skin and hair follicles, lining their walls and bases. The most important part in the process of repair after a burn is the manufacture and protection of new epithelium to take the place of that which has been destroyed or separated from its base. "Like begets like," and epithelium is developed only from epithelial cells. The surface epithelium may be totally destroyed and another surface

* Read before the Chattanooga and Hamilton County Medical Society, April 22, 1910.

epithelium manufactured to take its place, provided the burn has not been deep enough to destroy all the epithelial cells in the hair follicles and glands of the skin. The exudate thrown out into the tissues and on the surface of a burn furnishes food for the development of new epithelial cells. It also furnishes a fertile field for microbic development.

If the exposed surface of a burn becomes infected and suppurates there will be scar-tissue, contractions and deformity as a result. Scar-tissue continues to form as long as there is a denuded surface with any form of irritation. Therefore the amount of scar depends on the extent of the burn and the time required in forming a new epidermis.

A degree of heat sufficient to destroy living tissue will also destroy pus-producing germs. So in burns which become septic the infection almost invariably comes from without or extends from the margins of the wound. The surface of a burn does not absorb easily. Its tendency is to exude. But later in the course of a burn severe enough to devitalize the tissue decomposition takes place and toxins are formed, some of which will be absorbed.

There are four things to demand attention in the successful treatment of burns, any one or all of which may be required in a given case; first, to combat shock if it exists; second, to relieve pain and nervous excitability; third, to prevent infection and to protect exposed living tissue; and fourth, to assist Nature in her work of repair.

1. Shock, which often occurs as a result of severe burns, is treated on general principles too well known to the profession to be discussed in this paper. Some one has said, "Shock is shock," meaning that regardless of its cause, shock must be treated in the same manner under all conditions.

2. To relieve pain and nervous excitability, it is usually necessary to give a hypodermic injection of morphin and atropin and then to immerse the burned area, if it be on an extremity, in cold water to which has been added a tablespoonful of bicarbonate or chlorid of sodium to the gallon. It is not necessary for the water to be ice-cold. A temperature of from 50 to 60 F. is preferable.

If the burned area cannot be immersed in water on account of its location it may be covered with a light smooth cloth which has been dipped in the solution; then by gently and continuously mopping this cloth the same result will be obtained.

This water-bath may be continued for some time or until the systemic effect of the morphin is manifest.

In institutions where trained assistants are always at hand the whole bath may be used and continued for many days if a large area of the surface of the body is burned.

3. Protection of the tissues and prevention of infection demands our greatest efforts and must be kept in mind from the beginning. Nature puts forth her greatest efforts, and the system will exhaust its entire resources to accomplish this end; but Nature cannot prevent the invasion of pus-producing micro-organisms—the surgeon can.

I wish here to condemn two things often done, and at least sanctioned by most of our text-books: first, puncturing blisters immediately after a burn and second, the use of carron oil and other remedies of its kind as a protecting dressing.

A blister is a non-irritating protection to the delicate underlying structures, and the surgeon can furnish none better. I have never known the raised epidermis to reunite with its base after the blister was punctured. In most cases it acts as an irritant and for several days following it causes serum to be poured out under the dressings to soil them and furnish a good culture-medium for any possible pus-producing germs which may be barricaded waiting for an opportunity to assert themselves.

Within a few days the epithelial cells in the deep glands of the skin will have accomplished their work of repair if properly protected by the blister.

If any blisters are accidentally burst with the epidermis rolled up or displaced to any degree, such epidermis should be treated as so much débris and at once removed.

We long since discarded the once popular idea that the most favorable symptom appearing in the course of any wound was the free flow of pus. With that theory any agent which hastened suppuration was the most plausible remedy for a burn. Balsams, oils and poultices were used. The last one of such remedies to be discarded by rational ideas is still mentioned and advised by some of our modern text-books, especially works on practical therapeutics, namely, carron oil (equal parts of lime-water and linseed oil). In my opinion this remedy has to its credit more unsightly scars and disfiguring contractions than all other empiric remedies combined; with all of its kind it should have been discarded many years ago and buried with the theory which prompted its use. I consider the following the ideal method of protecting the tissues and preventing infection.

When the patient is fairly comfortable the bath may be discontinued, and the burned area with the surrounding surface sprayed or mopped with peroxid of hydrogen. The entire surface should then be mopped dry with gauze. Then strips of gauze which have been previously soaked in the following solution should be applied over the entire area.

R	gm. or c.c.		
Picric acid	4		3i
Alcohol	64	or	3ii
Water	72		O.iss

Over this a thin layer of cotton should be applied. The dressings should be kept in position by loosely applied adhesive strips or a roller bandage. This dressing soon dries and may remain for several days, or until it becomes soiled; at which time remove all soiled or wet dressings, spray with peroxid, mop dry and reapply fresh gauze soaked in the picric acid solution.

After the third day the larger blisters should be opened and the fluid contents mopped away and fresh dressings applied. This treatment is applicable to all burns whose severity is not great enough to cause sloughing.

If sloughing does occur as a result of charred tissue or later as a result of infection, the dead tissue should be removed as rapidly as it becomes separated, and the underlying exposed surface sprayed with peroxid, and mopped with the picric acid solution; over this should be applied small strips of rubber tissue which have previously been soaked in 1:1000 bichlorid solution. The dressing should be finished as before suggested.

The picric acid solution, by its slight astringent action, limits the exudation of serum by constricting the congested superficial capillaries, and does not interfere with the development of new epithelium. Its germicidal action prevents infection, and in my hands has never produced any systemic toxic effect.

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The rubber-tissue strips furnish a non-irritating covering to the denuded surface, and do not interfere with granulation in their removal. If the rubber tissue is applied in narrow strips, the edges being allowed to overlap, the dressing more perfectly conforms to the irregularities of the surface. This dressing should be changed as often as it is necessary to keep the surface clean and free from pus.

The treatment above outlined, allowing modifications in each individual case, is one which I consider most nearly ideal after ten years' experience in mining camps, dealing with every degree of this most common accident, from a slight scald to that produced by the most terrific mine explosions.

I have said nothing in this paper about the later complications and sequelæ, such as contractions, abscess formation, duodenal ulcers and those extensive burns demanding skin-grafting.

The object of this paper will have been attained if I have made clear the importance of treating all burns as wounds, and on a surgical basis, and that the prevention of infection and suppuration is by far the most important part of the treatment.

Therapeutics

PULMONARY TUBERCULOSIS TREATED IN HOME SANATORIA

The Medical Board of the Gaylord Farm Sanatorium, located at Wallingford, Connecticut, has just presented its annual report, and there is so much of general interest that it seems worth while to comment on it. This sanatorium is a state institution, supported by state funds and private charity. Most of the patients pay a small fee, but there is a weekly deficit for every patient treated. This institution has a capacity for 65 patients, and has just completed its sixth year of existence. It is located three miles from the small city of Wallingford, and fifteen miles from the city of New Haven, and from twelve to fifteen miles from Long Island Sound. It is situated on a hill not more than 400 feet above sea level, and has connected with it a large farm from which part of the produce, eggs, milk and poultry are furnished to the sanatorium.

The total number of patients under treatment during the last year was 166, the average number of patients under treatment at one time being 59. These patients came from all parts of the state of Connecticut, represented 15 nationalities, and came from 50 different occupations. Sixty-two of these patients remained at the sanatorium less than three months; of these 50 left the institution distinctly improved; in one the disease had progressed, and one died of acute pulmonary tuberculosis. One hundred and four patients remained at the Institution more than three months, the average stay being 161 days. Twenty-three of these patients who remained at the institution more than three months had the disease in its incipiency, and 21 of them were discharged with the disease arrested, 1 improved, and in 1 the disease was progressive. This result distinctly shows the advantage of early treatment of pulmonary tuberculosis in sanatoria. Seventy-five patients had the disease moderately advanced, of these 51 were discharged with the disease arrested, 11 had improved, in 11 the disease was progressive, and 2 died. Of 6 patients who had the disease far advanced, in 2 the disease was arrested, 2 improved, and 2 failed. Of the 104 patients who remained at the institution more than three months (incipient, moderately advanced, and far advanced), 74 or 71 per cent. of all, nearly three-fourths, were discharged with the disease arrested, and 14 more were distinctly improved. This is a record that is astonishing when not long since it was considered that patients with this disease must go to climates far better than southern New England before they could improve.

Ninety of the 104 patients who remained in the institution more than three months gained, on an average, 17.7 pounds as against 16.3 pounds in 1909 and 15.2 pounds in 1908. This is especially worthy of comment, as during the last eight months the patients had received no raw eggs, and have had no meat or eggs for breakfast, and the average consumption of milk has been a quart and a half pint daily. This gain is above the average of eight other leading sanatoriums, their average being 13.4 pounds, and the highest shown by any of them being 15.1 pounds.

From the very opening of this institution the medical board and the medical superintendent were a unit in believing that forced feeding in tuberculosis was a mistake. The over-working of organs and tissues to take care of enormous amounts of nutrition because one or two organs were diseased would seem an economic and physical mistake if it was not an actual physiologic error. Consequently good, nutritious food, but not forced feeding has been the character of the diet at this institution from its opening day, and Dr. David R. Lyman, the medical superintendent, has this year well demonstrated that even in earlier years the patients received too much food. The object is to furnish enough of each particular nutriment that is necessary to promote health, increase the weight of the patient, and to have a sound mind in, as far as possible, a sound body. Enormous amounts of food cloud the mental faculties and irritate and finally stagnate the functions of the body.

Since the institution was opened, 513 patients have been discharged prior to Jan. 1, 1910. Accurate information has been obtained concerning all but 17 of these patients. Up to Jan. 1, 1910, 105 patients who had the disease in its incipiency had left the institution. Of these 91, or 87 per cent. still have the disease arrested. Of the 293 patients who had the disease moderately advanced, 177, or 61 per cent. still have the disease arrested. Of 111 patients who had the disease far advanced, 16, or 15 per cent. still have the disease arrested.

These statistical results positively demonstrate that patients suffering from tuberculosis can have the disease well arrested and have it remain arrested, and perhaps be permanently cured, in the region, or at least in the climate to which they are accustomed. This is emphatically true if the patient, after the disease is arrested, is to remain and work in the locality where he acquired the tuberculosis.

Dr. Lyman is accumulating statistics which in a few years will be of great value in proving to the world what he has already proved to the medical board of this institution, viz., that patients who have the disease arrested thrive better, remain well longer, and are more permanently cured if they return to the occupations from which they came, *i. e.*, to the occupations to which they are used, and do not seek, under mistaken advice, some out-door work that is physically a hardship and generally causes them to work more hours,

and for which the wage is inferior to inside shop, store, factory or office work.

The points of this report for practical application are:

1. Early diagnosis of pulmonary tuberculosis.
2. Treatment in nearby sanatoria when possible.
3. A sensible diet and no forced feeding.
4. The stay at the sanatorium should be long enough to arrest the disease thoroughly.
5. Unless some particular unfavorable conditions should prevent, the patient should be returned to the occupation to which he is used.

VALUE OF DRUGS NOT NOW OFFICIAL

This is a subject now timely for active discussion, as, soon, the Committee on Revision of the United States Pharmacopeia must decide which new drugs are of sufficient therapeutic value to claim recognition in the Pharmacopeia of 1910.

Prof. H. C. Wood, Jr., of Philadelphia, in a paper recently read in Washington, presents the subject in such a terse manner for general discussion that his own abstract of his paper is here presented. Dr. Wood says:

Progress in materia medica does not consist merely in changing our drugs; we must improve them as well. There is no reason for abandoning old and tried remedies for new substitutes unless there is some definite evidence that the new remedy possesses more power or is free from some objection of the older one. For instance, in the series of coal-tar anodynes we have had brought to the attention of the profession a large number of synthetic compounds even in the single group of the phenetidin derivatives of which we have a representative in the Pharmacopeia in acetphenetidin. It is beyond comprehension how substituting for the acetyl radical that of some other organic acid can alter the therapeutic properties of the compound and yet the manufacturers have burdened our literature, to say nothing of the druggist's shelves, with lactylphenetidin, citrylphenetidin, salicylphenetidin, and so on. There is no satisfactory evidence that any of these can accomplish more than the official representatives of the series or that they are less dangerous in their secondary effects.

SEDATIVES

The drugs that are used to quiet cerebral excitement may be divided into two classes, those which are used to allay nervousness and those which are employed for the purpose of promoting sleep. Under the first head are two groups of substances, the derivatives of valeryl and various compounds of bromin. The pharmacologist can recognize no effect on the system by the valerates and the clinical evidence of their value is at least questionable. Of the substitutes for the bromids, the chief advantage that is claimed is that they are less likely to give rise to gastric disturbances. The irritation of the stomach by inorganic bromids is generally due to faulty administration and it is a matter of much doubt whether there is a necessity for any of the organic combinations in which bromin is the active ingredient.

SOMNIFACIENTS

The new hypnotics have come to be almost as numerous as the coal-tar anodynes. Three of them have been sufficiently tested to merit consideration. These are veronal, bromural, and isopral. The study of the relative value of these drugs necessitates an understanding of the chemical composition of hypnotic remedies. There are three principal groups of drugs which have the power to promote sleep. These are those belonging to the methane derivatives of which paraldehyd may be taken as a type, those containing an ester of urea and those containing the ethyl-sulphone radical, of which trional is the most popular member. The introduction of a chlorin atom into the molecule of the fatty series greatly increases the narcotic power. This is illustrated, for instance, by the higher activity of chloroform as compared with ether, and of chloral as compared to paraldehyd. At the same time that it increases the narcotic powers of the drug, there is an increase of the depressant action on the circulation, so that while these halogenic compounds are potent, they are likewise dangerous. If we remember that isopral is a trichlor-alcohol of propyl its chemical alliance to chloral (trichloraldehyd of ethyl) becomes apparent. It is also physiologically very similar and although Impens (*Therap. Monatsh.*, Sept. 1903) claimed that it was a safer remedy, the elaborate investigations of Sollmann (THE JOURNAL, Aug. 8, 1908, p. 487) and of Hatcher (THE JOURNAL, June 1, 1907, p. 1849) show that while it requires smaller doses of isopral to produce sleep, it requires correspondingly smaller doses to kill. There appears, therefore, to be no reason for the introduction of this substance into practical therapeutics.

An interesting group of hypnotics which includes a number of the newer drugs are the carbamic esters, or derivatives of urea. One of these is official, the carbamate of ethyl commonly called urethan. Two drugs of this group, diethylmalonylurea (veronal) and the alphamonobrom-isovalerylurea (bromural) have been used extensively in this country. The official representative of this group, ethyl carbamate, is one of the safest of all the sleep producing drugs. Its effects, however, in comparison to chloral hydrate are relatively feeble, and while in minor degrees of insomnia it is a useful remedy, in the more obstinate types of this condition it generally fails. In the case of veronal the narcotic power of the carbamic radical has been greatly enhanced, but as is so frequently the case, at the expense of its safety. A number of unpleasant symptoms and even serious poisoning by this substance have been reported. Bromural is generally conceded to be less powerful as a somnifacient than veronal and while perhaps useful as a nerve sedative, as a somnifacient does not appear to have any advantage over ethyl carbamate (urethan).

ANALGESICS

Of the central anodynes aside from the coal-tar derivatives, there are certain derivatives of morphin which merit a word of discussion. Generally speaking, the morphin esters differ from morphin itself chiefly in the fact that they have relatively less influence upon the higher cerebral centers. They are therefore greatly inferior as somnifacients or analgesics and also less liable to give rise to narcotic habits, although not entirely free from this danger. While these remedies may perhaps have occasional value as substitutes for morphin in painful conditions, it is necessary in order to produce an even approximate degree of anodyne effect to administer relatively much larger doses than of the natural alkaloid. The chief use of this group is as sedatives to the respiratory center in the treatment of excessive cough, asthma, and other respiratory irritations. The most valuable of them for this purpose is probably the acetyl ester of morphin commonly known as heroin. The advantages of heroin are that it is less likely to give rise to narcomania, that it produces less disturbance of the general health than morphin, and that it is

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relatively safer. The comparative safety of a drug is not to be judged merely by the quantity required to kill, but by the ratio between the lethal dose and the effective dose. Thus, in the experiments of Impens (*Arch. d. ges. Physiol.*, 1899, lxviii, 527) it was found that if a given weight of dog was killed by 1 grain of morphin although ½ a grain of heroin would kill the same weight of animal, it required but ¼ the dose of heroin to produce the same amount of respiratory sedation as of morphin. In other words, although the heroin was twice as poisonous as morphin, it was twice as safe because the limit between the therapeutic and toxic dose was larger.

LOCAL ANESTHETICS

The introduction of the method of producing anesthesia by injection of local anesthetics into the subarachnoid space, the so-called spinal anesthesia, has stimulated chemists to the invention of a number of compounds which might possess the local anesthetic power of cocain and be free from its objectionable features. Of these local anesthetics there are four which merit consideration. These are eucain, stovain, novocain and tropacocain. The advantages claimed over cocain for each of these are that they are less toxic than cocain; they do not produce vasomotor spasm; they do not affect the pupil or accommodation; and that they may be sterilized by boiling. As the advantages of each of them over cocain are the same, it is evident that the choice between them rests on their relative powers of toxicity. Biberfeld (Quoted by Schley, *New York State Journal of Medicine*, December, 1907) compared the toxic power of cocain, stovain, and novocain, and found that if the fatal dose of cocain be taken as one, that of stovain would be three and of novocain about six. In other words, novocain was one-half as toxic as stovain and only one-sixth as poisonous as cocain. Le Brocq (*British Med. Journal*, 1909, i. 783) has made a study of the comparative value of a number of local anesthetics. As regards their toxicity he ranks them as follows: alypin, 1.25, cocain, 1.00, stovain, 0.63, tropacocain, 0.50, novocain, 0.49 and eucain, 0.41. Stovain he condemns not only on account of its comparative poisonousness but also because it is intensely locally irritant. On the basis of this last quality, local irritation, he gives the preference to novocain over eucain and all others of the group. As for the comparative power on nerve endings while Le Brocq ranked them all as about equal with cocain, except stovain which he asserts is slightly stronger, the general concensus of opinion is that eucain and novocain are distinctly, if slightly, inferior to cocain while stovain is about equal to cocain. According to Harris, a 15 per cent. solution of eucain lactate is about equivalent to a 10 per cent. solution of cocain. It is possible that the clinical inferiority of these remedies as against cocain depend on the fact that not constricting the blood vessels circulation remains active and the drug is carried away from the point at which it is applied. At any rate, it has been shown that the addition of adrenalin not only prolongs the action of these anesthetics but also enhances their power.

DIURETICS

Among the drugs which increase excretion the most interesting are the diuretics of the xanthin series. Of these, caffein is already recognized by the Pharmacopeia. The disadvantages of caffein are its effects on the central nervous system (especially on the cerebrum, producing general nervousness and wakefulness) and its action on the circulation. Owing to the effects on the vasomotor center, the dilatation of the renal blood vessels, which is so closely associated with, if not the cause of, the increased activity of the kidney, is partially antagonized by the general contraction of the blood vessels in which the vessels of the kidney more or less share. For this reason, the diuretic action of caffein is frequently not so great in practical conditions as it is in laboratory experiments on the isolated kidney. The other members of this series have a less marked action on the central nervous system and therefore are less prone to produce wakefulness and also do not contract the blood vessels by vaso-motor stimulation. Of the series, two have been largely employed, theobromin and theophyllin. Theobromin, an alkaloid found in the chocolate bean, has some, but very slight stimulating effect on the brain, and while it increases the rate of the heart, causes almost no change in blood pressure. As a diuretic it is generally held to be superior to caffein chiefly because it can be given so much more freely without danger of undue nervous excitement. Theobromin itself is insoluble in water but becomes soluble in the presence of sodium salicylate or sodium acetate. The latter combination seems less prone to upset the stomach than the combination with sodium salicylate and is probably therefore preferable. Although theophyllin occurs in small amounts in the tea leaf, the supply from this source is so insufficient that it was impractical as a remedy until a means was found to manufacture it artificially. This synthetic theophyllin occurs in the market under the trade name of theocin. The general physiologic action of this substance has not been carefully worked out but is probably similar to that of theobromin.

ARSENICALS

A great deal of interest has recently been aroused in connection with various arsenical derivatives of which an immense number have been prepared by the chemist. The last word concerning these arsenic preparations has not yet been said. A large number of active workers are at present engaged in inventing and testing new organic compounds of arsenic, especially with the idea of determining an antidote to the trypanosome of sleeping sickness and may perhaps some day reach the ideal. In 1907, Drs. Dawes and Jackson (THE JOURNAL, June 22, 1907, p. 2090) made an elaborate study of sodium cacodylate. They found that this remedy had a range of usefulness analogous to that of the inorganic forms of arsenic. The advantages of lessened toxicity as compared with arsenic is more apparent than real because the therapeutic activity of the substance is also correspondingly less. Cacodylic acid and its salts are partially broken up in the system and varying amounts of the inorganic arsenic appear in the organs of the body and in the urine. Under a variety of trade names, such as "atoxyl," and "soamin," the sodium paramidophenylarsenate has been largely used not only in those conditions in which inorganic arsenic preparations are deemed useful but also in syphilis and a number of other conditions. While there is some evidence of its value in these cases, the considerable number of instances of blindness from optic atrophy following its use (*British Med. Jour.*, March 5, 1910; abstract in THE JOURNAL, Apr. 16, 1910, p. 1323) ought to exclude it entirely from our materia medica. There is little evidence that anything can be accomplished by inorganic arsenic that cannot be done with the older forms; but the cacodylates can be given with less danger of irritating the stomach and consequently a larger amount of the metal can be introduced into the system. They are also much better preparations for hypodermic medication.

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[For other information see second page following reading matter]

SATURDAY, JULY 2, 1910

LENGTHENING THE SPAN OF LIFE

Publication within the past three years of such works as Professor Minot's "Age, Growth and Death" and Metchnikoff's "Prolongation of Life," and their quick acceptance by the general public, are marked manifestations of the interest which is being taken in working out a rationale which shall result in making old age pleasant to itself and profitable to mankind. All men desire long life, but no man desires old age if this means feebleness of mind and inability to work; and since the days of Solomon this has been the common meaning attached to length of days. It has been frequently proved, however, that useful work can be performed by the aged. Only recently Dr. W. A. N. Dorland, of Philadelphia, in a magazine article, made an end of the "forty-year limit" so wilfully misunderstood by the critics of the eminent sponsor for that unfortunate jest. Plato, Goethe, Victor Hugo, Michelangelo, Titian, Franz Hals, to mention only a few illustrious names of the past, accomplished great things for posterity at a time when most of us now living would have been making hurried plans in preparation for eternity.

The average duration of human life has been on the increase for the last three hundred and fifty years. In the seventeenth and eighteenth centuries this increase was about four years per century; in the early part of the nineteenth century it was lengthened to nine years. In Massachusetts life is now lengthening at the rate of fourteen years per century; in Europe about seventeen; and in Prussia twenty-seven. The influence of the great strides in medical science is here quite apparent; for in India, where the application of new methods of preventing and treating disease has been retarded and neglected, the average life-span is now only about twenty-five years and remains stationary.

With this advancing world movement for the ultimate conquest of disease and death, the name of Elie Metchnikoff is indissolubly associated. For more than forty years (he is now sixty-five) Professor Metchnikoff's great gifts of mind have been employed in the cause of science, and, unlike some of his less fortunate predecessors and colleagues, he has seen these gifts bring rich returns in the service of mankind. To many laymen his name was doubtless unknown until two or three years ago, when the so-called "sour-milk method" for repelling the premature onset of old age was so widely exploited in the newspapers; but this is seemingly the least of his successes, and deserves to be so regarded until time and the collection of facts shall show that the Bulgarian bacillus wages warfare against the host of would-be destroyers in the intestinal tract of every living creature, without itself exerting in turn any injurious effect on the body economy. As yet this theory remains unproved; up to the present no elixir of life has been demonstrated.

It is to preventive medicine that we must look for the maintenance of that vigorous health which shall lead to the final period when one experiences a sense of satiety of life and a wish for death. That is the ideal of ripe old age—a practical, useful life rounded to a fitting close and marked by a minimum of suffering throughout. When one sees an active intellect, abundant scholarship and splendid judgment, ripened by experience and fruitful in wise counsel, tottering to its fall because of old age, it seems more than a pity that this mental growth, cultivated at such great expense of time and effort, cannot by some strange procedure of husbandry be grafted directly into a sound young body. Someone has said of a great man rapidly approaching the period of superannuation: "He needs only a pair of strong legs to be young again." That is, of course, an unrealizable ideal. It certainly is becoming possible, however, to eliminate some of the most dreaded scourges of youth and to protect normal old age from some of its greatest dangers; and these are the functions of the progressive physician and of the true philanthropist.

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THE USE OF TOBACCO

In England, at least, it seems that the question "Do you use tobacco?" must now be added to the anamnesis for women as well as for men. Angina pectoris has heretofore been comparatively rare among women; but Osler,[1] in a recent lecture, presages an increasing number of cases of cardiac neuralgia and of a mild form of angina in women, commensurate with the rapid increase of cigarette smoking among them. In England, it seems, many women are becoming habituated to the use of tobacco in this form; and possibly also, this vogue is obtaining among us to a degree which we, as practitioners, shall have to take into serious account.

Osler, for example, cites the case of an American woman whom he saw in Italy, whose daily allowance of cigarettes was never under twenty-five. Every morning precordial pains made dressing difficult for her. His observation that very heavy smokers may die from vagus-inhibition, such as obtains in angina pectoris, may be noted also in passing. Three of his acquaintances, seemingly strong, healthy men, not known to have had heart disease, but all incessant smokers of strong cigars,

1. Osler, W.: Angina Pectoris, Lancet, March 12 and 26, 1910; abst. in THE JOURNAL, April 9, p. 1239, and April 23, p. 1410.

died sud[illegible]ly and without warning—one while smoking, another while sitting comfortably in his club, the third on the beach after bathing.

Another word may here be interjected regarding angina pectoris in our profession. The proportion of our colleagues who suffer from this malady, the pain of which is so excruciating, and so dreadful to the beholder of these sufferings, is much greater than that in other professions. One reason for this is the profound nervous shock which physicians must feel when aroused after a couple of hours' sleep—when sleep is deepest; undoubtedly, however, another reason lies in smoking, to which the profession is unusually prone. Comment has been made, flippantly, but not without truth, on the coolness with which the medical man will advise his patient against smoking, while several cigars appear most obtrusively from his vest pocket.

WHERE GLUCOSE IS NOT CORN SYRUP

One of the first breaches made in the defenses raised in the interest of the public by the passage of the national Food and Drugs Act, was that secured by the manufacturers of glucose. While the pure food law demands that the label shall tell the truth, the makers of glucose protested that they should be permitted to call their product by the more euphemistic term "corn syrup." Permission to do this was granted, though the reason for such a liberal interpretation of the law in favor of the manufacturer and so evidently against the interests of the consumer, is not known.

Fortunately for the consumer, however, some of the states are not so accommodating to special interests. The state of Wisconsin, for instance, has a pure food law which requires that the label shall contain the naked truth rather than the skilfully adorned euphemism. Moreover—and this is of even greater moment—this state has a food commissioner who believes that the law is made to protect the public rather than to be used as an advertising asset by the manufacturer.

The result of this excellent combination has been that when the glucose trust tried to sell a mixture of 90 per cent. glucose with 10 per cent. real syrup under the name "Karo Corn Syrup," two retailers were arrested and the case brought into court. The case was fought bitterly, as might be expected, but first the Circuit Court upheld the contention of the state and later the Supreme Court of Wisconsin, to which it was appealed, sustained the constitutionality of the law. The opinion expressed by Judge Stevens of the Circuit Court, regarding the question, whether the term "corn syrup" was or was not misleading is so clear-cut and full of good sense that it is worth quoting:

"The evidence convinces the court that the public generally understand a 'syrup' to be the concentrated sap of a sugar-producing plant. The term 'corn syrup' naturally suggests that the product is a syrup produced from corn. Certainly the name carries no suggestion that it is produced by the action of acid on starch, which may be made from a score of different substances as well as from corn...Even if this product be a syrup, the difference in the cost of producing it, if no other factor were involved, would make it a fraud to sell this article to the public under a name that induces the belief that it is procuring a syrup produced in the usual way by boiling down the sap of a sugar-producing plant..."

"The question is not whether the term 'corn syrup' is coming into general use; the question is whether this name deceives the public and leads it to buy that which it would not otherwise purchase. Whether the product be wholesome or unwholesome, whether the consumer have valid reasons or only unreasoning prejudices in regard to the matter, the public has a right to know, and the state the right to compel the disclosure of, what is contained in all food products offered to the consumer...When the defendants established the fact that the public generally would not purchase the product if it were put out under the name of glucose (which is shown to be a proper designation), they brought the case within the realm where the state, exercising the police power, has the right to determine that it shall no longer be sold under a name which misleads the public."

"The Constitution does not confer on any man the right to keep secret the composition of the substance which he offers to the public as a food product. To compel him to disclose its composition does not deprive him of his property without due process of law, even though it may prevent him from using a trade name. He may be compelled to sell the product for what it actually is, on its own merits, and is not entitled to the benefit of any additional market value which may be imparted to it by resorting to any means which shall make it resemble, or sell for, or in the place of, any well known food product."

And the judge of the Supreme Court voiced the same sentiment when he said: "Nor can it be said that the great mass of persons understand that 'corn syrup' is a mixture of glucose and syrup. The natural result of such use of the term 'corn syrup' is to mislead the consumers into the belief that they are obtaining a table-food of the variety and kind commonly known as syrup, the product of sugar-producing plants, and the consequences of such practice are that the consumers are misled and deceived in the respects as to the actual nature, the constituents and the value of the article as a food product."

To punish the people of the state of Wisconsin for daring to dictate to the glucose trust that this concern shall tell the truth about its product, the trust has declared a "glucose boycott" on the Badger state. No more "corn syrup" will be shipped into Wisconsin, so the papers say, "until the existing condition of affairs

is reversed." This is a modification of the famous "red clause" of the "patent medicine" interests, adapted to the glucose industry. For the past few years "Karo" —a trade-marked name for glucose flavored with syrup —has been heavily advertised all over the country. We may now expect the advertising patronage of the glucose trust to be withdrawn from the state of Wisconsin in the hope that the newspapers of the state will bring pressure to bear on the state legislators to amend and emasculate the present law. It is to be hoped that Wisconsin newspapers in this instance will not sell their birthright of journalistic freedom for a paltry mess of advertising pottage, as they did when a bill was before their legislature requiring "patent medicine" manufacturers to state the composition of their nostrums.

As for the people of Wisconsin, they are doubly to be congratulated: first, on possessing both an admirable law and honest officers to enforce it; second, on being relieved of the necessity of watching to see whether they are having a glucose mixture foisted on them in the place of, and at the price of, real syrup. Incidentally Wisconsin would seem to offer great commercial opportunities to the makers of real syrup.

PHARMACEUTICAL MANUFACTURERS AND THE GREAT AMERICAN FRAUD

The story is told that a few years ago an enterprising gentleman of the Rufus Wallingford type advertised that he would mail, post paid, to all who sent him fifty cents, a handsome picture of the Father of Our Country. Those who rose to the bait received an uncancelled two-cent postage stamp. The advertiser was declared a fraud and the get-rich-quick scheme was frustrated.

Let it be supposed for an instant that the courts had decided in this case that no technical offense against the law had been committed; that as the advertiser had actually furnished what he advertised he was legally within his rights. Let it be supposed, further, that under such a court ruling the postal authorities contracted to furnish this "picture" seller all the "pictures" (stamps) that he cared to purchase. What would be the status of the government in such a case? Undoubtedly in the eyes of the public the postal authorities would have been considered as aiding and abetting a swindle and a fraud—a moral fraud, and one more despicable than a legal fraud because under the existing law it could be perpetrated with impunity.

Supposedly reputable pharmaceutical houses that furnish medicinal products to firms or individuals whom they know to be in the business of cruelly defrauding that most helpless portion of the public—the sick—are in the same position that the postal authorities would be in in the hypothetical case just given. Legally they may be within their rights but ethically and morally their course is iniquitous. No amount of argumentative sophistry will justify, in the eyes of the medical profession, the attitude taken by those manufacturing pharmacists who are willing to sell their products to any who will pay for them, no matter to what use the drugs are to be put.

In our Pharmacology department, this week, attention is called to specific cases in which nostrum exploiters have been supplied with their stock-in-trade by pharmaceutical houses which should be above such things. That a much greater list than that given could be made if the data were available, nobody doubts. "Castor-Oil Pills" were widely exploited not long ago by an advertising man; the pills, which were a simple laxative mixture without a trace of castor oil, are said to have been made by one of the large "ethical" pharmaceutical firms which must have known of the dishonesty and fraud connected with their sale. "Pennyroyal Pills," which were extensively advertised as alleged abortifacients but which contain no pennyroyal, are also credited as having their origin in a pharmaceutical house which stands high in the estimation of the medical profession. One of the cruellest and most fraudulent of the innumerable "consumption cures" on the market is alleged to be put up for the quack who sells it by an "ethical" firm. And so it goes.

How much longer manufacturers of pharmaceuticals will maintain this Janus-faced attitude depends largely on the medical profession. It is safe to assert that no firm would for long continue this wretched business in the face of insistent disapproval from physicians.

Current Comment

CHINA AND OPIUM

According to missionary testimony, China is acting in earnest in the suppression of the opium curse, and anti-opium leagues have been formed in many of the great cities. According to Rev. W. L. Beard, there were, in the city of Fu Chau, three years ago, more opium dens than rice shops, but now, through the influence of the anti-opium league, there is not a single one. One of the most encouraging evidences, however, is the fact stated in a recent dispatch that the danger of famine in the western districts of China is lessened by the amount of land which has been diverted from opium culture under the recent laws and devoted to the growth of food products. While there used to be enormous fields of poppy flowers, making this crop the most conspicuous of any, there are now fields of rice and hemp and the open culture of the opium plant is largely a thing of the past. Without doubt there are opium dens publicly open in some provinces, especially near the European settlements, and illicit sales still continue in Chinese "blind pigs" elsewhere, but the outlook seems to be encouraging.

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FACULTY CHANGES

Dr. David Streett, dean of the Baltimore Medical College, writes that the following additions have been made to the medical faculty: Dr. T. B. Marden has been elected professor of biology, including histology, embryology and zoology; Dr. E. L. Whitney has been reelected professor of physiologic chemistry and pharmacology; Dr. H. Raymond Spencer, demonstrator in physiology; Dr. Reginald D. West, demonstrator in anatomy. It is stated that these instructors will devote all their time to teaching and research and that a full-time instructor in pathology and bacteriology will also be secured in the near future.

NEW INSTITUTE OF CLINICAL RESEARCH

It is reported that $200,000 has been donated by Mrs. Robert Dawson Evans, of Boston, for the erection of an Institute of Clinical Research and Preventive Medicine, to be under the direction of the Massachusetts Homeopathic Hospital. It will be built on land immediately adjoining the Boston University School of Medicine with which it will be connected by a passageway. It will also be connected by a subway with the hospital. The object of the institute is the investigation of all phases of clinical medicine as they are allied to methods of laboratory study, including particularly cancer and other diseases at present considered incurable. There will also be a ward for neurologic patients and the top floor will be entirely occupied by laboratories of pathology, bacteriology, physiology, chemistry and drug pathogenesis.

STRAW ITCH

Straw itch may be considered a new disease or, possibly more properly, a disease of which we have but recently acquired definite knowledge. In the early part of the summer of 1909 there was an outbreak of an eruptive skin disease among sailors in Philadelphia. The disease was studied by Goldberger and Schamberg, who ascertained that the cause was a small mite (*Pediculoides ventricosus*) in the straw of mattresses on which all those affected with the disease had either slept or had put their clothes. Outbreaks of what is in all probability the same disease have been reported from various points in New Jersey, Maryland, Pennsylvania, Ohio and Indiana. The mite preys on the larvæ of certain insects which live on grain and especially wheat. It remains on the straw and may attack man during the handling of the grain as in thrashing or if the straw is used in filling mattresses those sleeping on them may be infected. The main symptoms of the disease are a severe itching and an eruption consisting of wheals surmounted by vesicles which develop in a few hours into pustules.

Medical News

CALIFORNIA

College Commencement.—On June 2 the Oakland College of Medicine and Surgery graduated three physicians. Dr. F. Dudley Tait, San Francisco, delivered the principal address.

King Edward's Physician in San Francisco.—Sir Felix Semon, K.C.V.O., and wife, physician extraordinary to the late King Edward VII, made a short stay in San Francisco, May 27, on the completion of a tour around the world to the eastward.

Antituberculosis Societies.—The San Diego Society for the Study and Prevention of Tuberculosis was recently incorporated. Among the physicians taking an active interest are Drs. Joseph A. Parks and Fred R. Burnham.——The Long Beach League for the Prevention of Tuberculosis has elected Dr. Charles Bown, president; Dr. Francis L. Rogers, secretary, and Dr. Balzar W. Scheurer, treasurer.

Personal.—Dr. William K. Lindsay, a physician of Sacramento, has been appointed by the State Board of Education to supervise the health department work in the public schools. Dr. Gustav Henrikson has been made assistant.——Dr. and Mrs. Harry E. Alderson, San Francisco, have gone to Honolulu.——Dr. Augustus F. Shafer, Bakersfield, has been employed by the Mexican government to combat typhus fever.——Dr. Stewart M. Doherty, Napa, has been appointed pension examining surgeon.——Drs. Robert F. Rooney and J. N. Ward have been appointed on the board of health of Auburn.

COLORADO

Hospital for State Penitentiary.—The former Women's Department of the State Penitentiary, Canon City, has been remodeled into a hospital building with sun parlor and seperate quarters for tubercular patients.

Inspection of Lying-in Hospitals.—The State Board of Charities recently conducted a rigid inquiry into the methods of lying-in hospitals in the state. Insanitary and otherwise objectionable institutions have been closed. The state will safeguard infants adopted from such institutions.

ILLINOIS

Chicago

Personal.—Dr. and Mrs. Albert E. Mowry sailed from Montreal, June 30, for the Continent.——Dr. Benjamin H. Frayser has also left for Europe.——Dr. and Mrs. William O. Krohn have left for Europe by way of a motor trip through New England to Montreal.

Chicago Medical Society Election.—The annual election of the Chicago Medical Society occurred June 14 and resulted as follows: President, Dr. Alexander Hugh Ferguson; secretary, Dr. George F. Suker; councilors at large, Drs. Henry F. Lewis, Arthur M. Corwin, Adolph Gehrmann, Charles J. Whalen and Ludwig Hektoen.

Police Department to Run Hospital.—The Harrison Street Emergency Hospital will be conducted under the supervision of the chief of police after July 7, when it will be abandoned by the city health department. Chief Steward says it is the only hospital of the kind in the city and too valuable to be abandoned. It cares for from thirty to fifty cases each week. The chief inspected the hospital and found it in good condition.

The Work of the United Charities.—The report of the work accomplished during the past year by the United Charities of Chicago is sufficient to justify the hope that $50,000 additional annual subscriptions may be secured, making in all $200,000 annual income. There was a deficit of $2,300 in the last year's work, which is considered a good showing. Infant mortality has been reduced to 165 in each 100,000 inhabitants, the lowest record reached in Chicago.

Donations for Loyola Medical Department.—It is reported that $60,000 has recently been contributed for the construction of a new three-story medical building, at the corner of Fulton and Ada streets, for Loyola University Medical Department. This is to provide space for anatomic and chemical laboratories and for two large lecture rooms. It is also reported that provision has been made for five instructors who will devote all their time to teaching in the medical school.

IOWA

Drake Alumni Meeting.—At the alumni meeting of Drake University, held at Fort Madison recently, Dr. John R. Walker, Fort Madison, was elected president. A gift of $50,000 to Drake University by Theodore P. Shonts, an alumnus, now of New York, was announced.

Personal.—Dr. Harry E. Kirschner, superintendent of the state sanatorium at Lakedale, has been granted a three months' leave of absence for study in the east. Dr. Clarence E. Van Epps, Iowa City, will have charge of the sanatorium during Dr. Kirschner's absence.——Dr. Irenarch S. Buzard, Russell, has gone to England for study.——Dr. William P. Crumbacher, superintendent of the state hospital for insane, Independence, has been reappointed.——Dr. Francis H. Boucher has been appointed coroner to fill the unexpired term of the late Elijah W. Jay, at Marshalltown.

MARYLAND

Psychiatric Society Meets.—The Maryland Psychiatric Society was entertained at Creighton's Sanatorium, Lutherville, June 23, by Dr. L. Gibbons Smart. A paper was read by Mr. Nathaniel G. Grasty, secretary to the supervisors of city charities, on "The After-Care of the Insane." A committee was appointed to report on an epileptic colony in Maryland. The next meeting will be held in Annapolis.

Baltimore

New Feature of Hopkins Medical Clinic.—A "heart station" will be instituted at the medical clinic of Johns Hopkins Hospital next fall. It will be equipped with a special laboratory for examining the heart by electricity and other new graphic methods of registration.

Law Cases.—Suit for $50 against Dr. John D. Blake for alleged unskilled treatment of a child at birth, was decided in his favor.——A verdict for $500 is said to have been awarded May 25, against Dr. G. Milton Linthicum on account of injuries sustained by a driver from a mule frightened by Dr. Linthicum's automobile.

Personal.—Dr. Alexius W. McGlannan, of the College of Physicians and Surgeons, delivered the address at the commencement of St. Joseph's College, R. C., June 21.——Dr. John M. T. Finney sailed for Europe June 22.——Dr. Peregrine Wroth, Hagerstown, was operated on at the Union Protestant Infirmary, June 22, for appendicitis.——Surgeon Henry R. Carter, United States Public Health and Marine-Hospital Service, was given the degree of LL.D. by the University of Maryland at its recent convocation.

MISSOURI

St. Louis

Hospital Staff Named.—The hospital board of St. Louis has appointed thirty-six physicians on the visiting staff of the several institutions for four months. Future appointments will be determined by competitive examination.

Medical Degrees at Washington University.—Washington University graduated 175 students in Graham Memorial Chapel June 8. Rev. Dr. George Hamilton Combs, Kansas City, delivered the main address. Dr. William H. Welch also addressed the students.

American Medical College Reorganized.—The trustees of the American Medical College of St. Louis—eclectic—decided, June 6, that in the future the college should be conducted as a regular college of medicine. New officers elected were: Dr. James Moores Ball, dean; Dr. Ward T. Burdick, secretary, and Dr. J. Joseph Link, treasurer.

Hospitals Merge.—The Martha Parsons Free Hospital for Children and the St. Louis Children's Hospital consolidated June 1. The Martha Parsons property will be abandoned and the patients transferred to the St. Louis Children's Hospital. The income of the former will be used jointly with that of the latter for maintenance of the institution.

Apportions Medical Fund.—The income from the $100,000 originally intended for the purchase of a suitable hospital site, and estimated at $5,000 annually, is planned to be apportioned among the hospitals connected with the St. Louis University, as follows: St. John's, $1,000; St. Mary's, $500; Alexian Brothers', $300; St. Anne's Infant Asylum, $200, and Rebekah Hospital, $3,000.

NEW YORK

Employers Liability Bill Signed.—Among the last bills signed by Governor Hughes was the Wainwright compulsory employers liability bill. A plan of compulsory compensation applicable to certain dangerous employments was presented in the present bill and it also contained the proposals of the commission appointed to investigate the subject of employers liabilities as amended in certain particulars by the legislature.

Milk Violations Decrease.—Figures compiled at the attorney-general's office at Albany indicate that the strict enforcement of the pure food law since Jan. 1, 1909, has raised the standard of milk sold throughout the state. In the last few months the number of violations in regard to the sale of milk has shown a decrease. For several years impure milk has given the attorney-general's office more trouble than any other article of food.

Mayors' Health Conference.—The Mayors' Health Conference which convened in Schnectady June 24, will become a permanent institution and will hold conferences annually. At this session Dr. Albert W. Ferris, President of the State Commission in Lunacy, read a paper on "Fighting Insanity." Prof. Walter Wilcox of Cornell University spoke on "Methods of Determining Economic Losses from Preventable Diseases." He placed the economic loss of the nation due to tuberculosis at from $450,000,000 to $650,000,000 annually. Dr. H. D. Pease of the Lederle Laboratory places the loss in New York state at $70,000,000 annually. Dr. George W. Goler of Rochester spoke on "How to Get Competent Health Officers." At the evening session Dr. Woods Hutchinson spoke on "The Greatest Problem of Modern Sanitation," Dr. Harvey W. Wiley of Washington on "What the Small City Can Do to Protect Its Food Supply," and Prof. Charles Zueblin of Boston on "Obligations and Opportunities of Local Officials."

New York City

Seagoers.—Dr. and Mrs. W. E. Lambert, Dr. and Mrs. J. William White, Dr. R. M. Cramer and Dr. Austin W. Hollis have sailed for Europe.

Gift for Cancer Victims.—The Servants of Relief, under the leadership of Mother Alphonse, Nathaniel Hawthorne's daughter, have received a gift of $25,000, with which they expect to build an annex to the cancer hospital, known as St. Rose's Home, on Cherry street.

Dispensary Reopened.—The Bedford Dispensary, Atlantic and Ralph avenues, has been reopened after having been closed for a period of two years on account of lack of funds. A band of women who have made it possible to renew this work are determined that treatment shall be reserved for those who really are needy and have appointed several agents who look up applicants.

More Aids at Bellevue.—The Board of Trustees of Bellevue and the allied hospitals made three new medical appointments. In accordance with the request of Dr. W. H. Smith, the general medical superintendent, Drs. George O. Hanlon and Mark L. Flemming were appointed assistant medical superintendents and Dr. Edward S. Bishop was appointed resident physician in charge of the alcoholic service.

Personal.—The degree of doctor of science was conferred on Dr. Francis Valk at the commencement exercises of Washington College at Chestertown, Md., June 15.——The following changes have taken place in the Eastern District Hospital, Brooklyn: Dr. Martin J. Leibovici has completed his service and opened offices for practice; Dr. Aaron B. Cohn has been promoted to house surgeon; Dr. Louis J. Frank has been appointed ambulance surgeon; Dr. Joseph Rosenberg, house physician, and Dr. Albert Polon, pathologist.

Objects to Judicial Decision.—Bellevue Hospital will cause an appeal to be prosecuted in a case recently decided in the supreme court in this city by Justic Erlanger. A lawyer was charged with violating the penal code in having procured an attendant in Bellevue Hospital to furnish him with information regarding the condition of patients being treated for personal injuries attributed to negligence. The defendant contended that it was no crime to solicit such information and Justice Erlanger seems to have upheld this view.

Find Evils in Hospitals.—A special commission appointed by the State Board of Charities has just completed an investigation of some sixty private hospitals in the greater city and adopted resolutions to remedy some of the evils found. In at least twelve of the hospitals the sanitary, ventilating and fire-escape facilities were found to be inadequate. A half a dozen hospitals were found to be much overcrowded, there being insufficient space between the beds. One of the resolutions provides that no patient shall be retained at public expense in any hospital wholly or partly under private control, unless the building is fireproof and sanitary with at least twelve hundred cubic feet of air space for each patient in the ward.

New Long Island Hospitals.—The hospital being erected on Surf avenue, Coney Island, by the Brooklyn Children's Aid Society at a cost of $90,000, will be managed in connection with the Seaside Home. It is expected that it will be ready

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by December 1.——St. Mary's Maternity Hospital, Brooklyn, will be reopened after having been closed for a year. It has been remodeled and renovated at a cost of $50,000 and will be known hereafter as the Hospital of the Holy Family.——Those interested in the proposed Beth Jacob Hospital and Dispensary announce that sufficient funds have been raised to enable them to begin erection. The hospital is to be conducted in accordance with Jewish dietary laws, though they will not discriminate in accepting patients.——The Bayside Infirmary, a twenty-bed, well equipped private hospital, under the directorship of Dr. Harris A. Houghton, will be opened for patients at Bayside, August 1.

PENNSYLVANIA

Personal.—Dr. Henry H. Dancy, Phoenixville, while hastening to the bedside of a dying friend, June 24, was thrown from an automobile and seriously injured.——Dr. William W. Keen, Philadelphia, sails for England July 2.——Dr. William T. Moore, Washington, has been appointed medical missionary to Egypt by the board of foreign missions of the Presbyterian Church.

Smallpox at Dickson City.—An epidemic of smallpox has been discovered at Dickson City, which is practically a suburb of Scranton. Twenty-six cases have been reported. Dr. Samuel Dixon, head of State Department of Health, has assigned Dr. P. F. Royer to take charge of the situation. All patients convalescing and those suspected of being infected are strictly quarantined.

King Edward Memorial Research Laboratory.—This laboratory is not to be given to the proposed municipal tuberculosis hospital, as stated in THE JOURNAL June 18, but is given to the hospital of the Tuberculosis League of Pittsburg, which has been carrying on a comprehensive municipal scheme for the city of Pittsburg for the past three years. Dr. William Charles White, the director of the tuberculosis league, is to be the director of the new laboratory.

Medical Societies Celebrate.—A joint midsummer outing, closing the winter session of the Lackawanna and Luzerne county medical societies, was held on June 21 at Rocky Glen Park, near Scranton. One hundred and eighteen physicians attended the afternoon session, at which addresses were made and papers were read. In the evening a banquet was served in the "Swiss Chalet" of the park. Dr. J. M. Wainwright is president of the Lackawanna and Dr. G. A. Clarke is president of the Luzerne County Medical Society.

Governor Talks to Medical Alumni.—At a meeting of the alumni of the Medico-Chirurgical College, June 2, Governor Stuart was the chief speaker. He declared that Pennsylvania had expended more money in the advancement of medical science than any other state. He said that Pennsylvania gives $7,000,000 to the cause of medicine and $1,000,000 goes annually to the support of the health department. Pennsylvania is a pioneer in the cause of tuberculosis and has expended $2,000,000 in two years in the erection of sanatoriums for the care of persons afflicted with the disease.——In discussing the question of union of the Medico-Chirurgical with Jefferson, Henry F. Walton, president of the board of trustees of the Medico-Chirurgical College, expressed himself as unalterably opposed to such a union.

Henry Phipps Tuberculosis Institute.—Mr. Henry Phipps of New York has selected the University of Pennsylvania to carry on the work of the Phipps Institute and has acquired ground in Philadelphia on which will be erected a hospital for this purpose. The extent of the benefaction exceeds $5,000,000. The report of the comittee appointed to consider the future policy of the institute has been approved by Mr. Phipps and the trustees of the university. For director of the laboratory Dr. Paul Lewis, now of the Rockefeller Institute, has been selected; for director of the sociologic department, Mr. Alexander M. Wilson, of the Boston Association for the Relief and Control of Tuberculosis; for director of the clinical department, Dr. H. R. M. Landis. In addition to a board of eight directors, who will be directly responsible to the trustees of the university, an advisory council will meet annually at the institute. The following have accepted the invitation to serve as members of this body: Drs. Samuel G. Dixon, Harrisburg, Pa.; S. M. Lindsay, New York City; William H. Baldwin, Washington, D. C.; Herman M. Biggs, New York City; William H. Welch, Baltimore; Theobald Smith, Boston; H. Gideon Wells, Chicago; Simon Flexner, New York City; James A. Miller, New York City; L. Brown, Saranac, N. Y.; Henry Baird Favill, Chicago, and James Pratt, Boston.

Philadelphia

Addition to Methodist Hospital.—Through the munificence of Thomas Bradley, president of the Methodist Hospital, a four story building, known as Bradley Hall, will be built at once on the hospital grounds at Broad and Wolf streets. The building will cost $41,000 and will contain kitchens, dining rooms, sewing room, chief resident's suite and rooms for help, thus affording room in the main building for fifty additional beds.

Personal.—Dr. Walter S. Cornell, demonstrator of osteology at the University of Pennsylvania, was taken to the university hospital on June 20, suffering from gastric ulcer. His condition is improving.

Plan Home for Feeble-Minded.—At a meeting held at the Civic Club on June 21, attended by prominent sociologists and city officials, plans were considered for the establishment of a fully equipped institution for the care of feeble-minded children. From statistics gathered by Director Neff of the Bureau of Health it was estimated that there are 1,000 feeble-minded persons at large in this city, through the lack of sufficient accommodations in the state institutions. Byberry, where the city owns vast tracts of land, was favored as the site for the erection of such home.

Pellagra at Blockley.—Dr. W. W. Hawke, chief resident physician of the insane department of the Philadelphia General Hospital, under the supervision of government officials, began a rigorous examination of all the patients in the insane department. Twelve cases of pellagra have recently been discovered in the institution, the first cases of the disease recognized in this city. Sixteen other patients are believed to be pellagra victims, but the diagnosis has not been fully established. Dr. J. D. Long, a government physician, who has made an extensive study of pellagra, and Dr. H. F. Harris, of the Georgia State Board of Health, in association with Dr. Hawke, are making a careful study of the cases.

GENERAL NEWS

Milk Commissions Meet.—The American Association of Medical Milk Commissions held its fourth annual session in St. Louis, June 4 and 6, and elected the following officers: President, Dr. Milton J. Rosenau, Harvard University; secretary, Dr. Otto P. Geier, Cincinnati; treasurer, Dr. Albert W. Myers, Milwaukee, and councilor, Surgeon John W. Kerr, U. S. P. H. and M.-H. Service. Philadelphia was selected as the meeting place for 1911.

Memorial to Dr. Howard T. Ricketts.—A memorial tablet was unveiled in the City of Mexico in honor of Dr. Ricketts, June 24, as will be seen by the invitation to the ceremony given below:

"La Secretaría de Instrucción Pública y Bellas Artes suplica á Ud. se sirva honrar con su presencia la ceremonia que se efectuará el 24 del actual, á las 10 de la mañana, en el Instituto Bacteriológico Nacional (Popotla, D. F., calle de Gonzalo Sandoval, 4), para descubrir una lápida conmemorativa en el laboratorio del mismo Instituto en que trabajó el Sr. Dr. D. Howard T. Ricketts, distinguido profesor de las Universidades de Chicago y Pennsylvania, que perdió la vida en el curso de sus investigaciones sobre el tabardillo. México, 17 de junio de 1910."

[The Minister of Public Instruction and Fine Arts requests the honor of your presence at the ceremony which will be held at 10 a. m., June 24, in the National Institute for Bacteriology, for the unveiling of a memorial tablet in the laboratory of that institute in which worked Senor Dr. Don Howard T. Ricketts, distinguished professor in the universities of Chicago and Pennsylvania, who lost his life in the course of his research on Mexican typhus. Mexico, June 17, 1910.]

American Association of Medical Journal Advertisers.—This association held its fourth annual meeting in St. Louis, June 9. Vice-President Dr. S. Grover Burnett, Kansas City, presided. The secretary's report showed that a large number of objectionable advertisements had been eliminated from the pages of medical journals through the efforts of the association during the year, but that there was much yet to be done to clear their pages of quack advertisements. The following resolution offered by Dr. Burnett was unanimously adopted:

Resolved, That, where the business of an institution has been built up by newspaper advertising or other irregular methods, the owners or managers thereof shall not be accepted as members of this association or their advertisements permitted to appear or remain in journals containing the advertisements of members of this association until such institution has purged itself of irregularity to the satisfaction of the county medical society of the county in which it is located.

The following officers were elected: President, Dr. S. Grover Burnett, Kansas City, Mo.; vice-president, Dr. George H. Moody, San Antonio, Tex.; secretary, Dr. George E. Pettey, Memphis, Tenn.; executive committeemen, Dr. J. Joseph Kindred, Astoria, L. I.; Dr. F. H. Barnes, Stamford, Conn.

CANADA

Annual Meeting of the Canadian Association for the Prevention of Tuberculosis.—The seventh annual meeting of this association was held in Montreal, June 7 and 8, under the presidency of Prof. J. George Adami. Dr. Adami advocated the formation of Protestant institutions for the care of the tuberculous similar to those in vogue under the charge of the Catholic Sisters of Quebec, who the past few years, especially the Sisters of Providence, have been doing a great deal of good work along these lines. Major-General George M. Sternberg of Washington delivered an address on "The Housing of the Working Classes As a Factor in the Prevention of Tuberculosis."

Personal.—The following Toronto practitioners are sailing for Europe: Drs. Adam H. Wright, Herbert A. Bruce, Allen Baines, Irving H. Cameron, F. N. G. Starr.——Dr. Charles A. Hodgetts, secretary of the Ontario Board of Health, has resigned and has been appointed secretary to the public health section of the Canadian National Conservation Commission. Dr. J. W. McCullough of Alliston, Ont., has been appointed to succeed Dr. Hodgett.——Dr. A. I. Maider, Halifax, has returned from Edinburgh.——Dr. Oskar C. Gruner, clinical pathologist to the General Infirmary, Leeds, England, has been appointed pathologist to the Royal Victoria Hospital, Montreal, and lecturer on pathology at McGill.——Dr. Charles Sheard, medical health officer and chief of the street cleaning department of Toronto, has resigned.——Dr. John D. Wilson, London, is reported to be critically ill.

The Carnegie Foundation Report and Canadian Medical Colleges.—According to this report, which has just been distributed in Canada, four of the eight medical colleges would meet the needs of medical education in Canada. These are Toronto, McGill, Manitoba and Laval at Quebec. Toronto and McGill are put down as first class. Toronto has about reached its efficiency. McGill and Manitoba are capable of considerable expansion. Laval at Montreal and the Halifax Medical College are feeble. London is said to be very bad. The future of Queen's at Kingston is doubtful. Probably it would be a good thing for Canadian medical education if Laval at Montreal united with Laval at Quebec, that Halifax should become a preparatory school for McGill, and the Western at London and Queen's should become preparatory schools for Toronto. McMaster University, Toronto, however, has some idea of some day establishing a medical faculty. Later on, as the west develops, there will likely be a medical college in Vancouver.

Convocation at McGill.—On June 10 convocation was held at McGill University for medical and dental degrees. Dr. T. Wesley Mills, who for many years has been professor of physiology, delivered an address to the graduates in which he announced his retirement. Dr. Mills will take up his residence in Germany for the recuperation of his health. In his address he scored the citizens of Montreal for taking so little interest in their university. Referring to the teaching of medical students, he said they were given a great deal too much to digest; they should be taught less but taught better. He thought there were too many practitioners on the faculty, and that the aim of the faculty should be to teach the students to be men first and medical practitioners second. At the close of his address he was presented with a purse of gold by Dean Shepherd, on behalf of the faculty. Dr. Shepherd announced the retirement of Prof. William Gardner from the chair of gynecology. Dr. Gardner has been connected with the faculty for twenty-seven years. Announcement was also made of the appointment of Dr. J. C. Simpson as professor of embryology and histology.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, June 18, 1910.

The Antituberculosis Campaign

The antituberculosis campaign is still being pursued with great energy, but the problem of providing adequate sanatorium accommodation remains a difficult one. There has been a great diminution in the number of cases of consumption in England and Wales in recent years, but they still amount to between 250,000 and 300,000, while the number of beds available at sanatoriums numbers only 1,500. The average duration of treatment in a sanatorium is from 4 to 6 months. Therefore there is only sanatorium accommodation for 1 to 1.5 per cent. of those who may require it. Each year there are 40,000 deaths from consumption and 20,000 from other forms of tuberculosis. It seems that adequate accommodation can be provided only by the state or by some form of insurance against disease, including tuberculosis, like that adopted by Germany. The cost would to a large extent be saved by diminution in the loss which now results from tuberculosis. It is calculated that friendly societies pay each year for consumption 86,000,000, the poor-law authorities 87,000,000 and the special hospitals 82,500,000. In addition to this the indirect loss due to loss of wages cannot be less than $20,000,000 to $25,000,000. This makes a total annual loss of $40,000,000, a figure which some authorities consider much too low. Addressing the Manchester and Salford Sanitary Association, Dr. Arthur Latham of St. George's Hospital said that if all this money were intelligently spent the disease could be eliminated in 20 to 30 years.

The National Association for the Prevention of Consumption and Other Forms of Tuberculosis is undertaking a new educational campaign by means of traveling tuberculosis exhibitions, caravans with lantern-slides, popular lectures, an information bureau for the press and public and the distribution of leaflets. It is estimated that an efficient campaign on these lines will cost not less than $25,000 annually. A special effort is being made to secure the cooperation of working-class organizations in the campaign. A tuberculosis exhibition has been held at various centers in London. At Whitechapel (in the east end) 70,000 persons visited it, and it was equally successful at the other centers, as well as in the country, at Cambridge, Oxford and other places.

Decline of Venereal Disease in the Army in India

One of the remarkable features of the medical statistics of the British army in recent years is a decline in the number of cases of venereal disease. In India the admission rate in 1908 fell to 69.6 per 1,000, the lowest on record. This result is largely due to the efforts of the authorities to stamp out vice and to make the men's lives attractive. The various church bodies and the Royal Army Temperance Association have worked strenuously for this end.

Leprosy in London

The presence of a case of leprosy in the Whitechapel Union Infirmary (in the east end of London) has given rise to some anxiety, as no provision exists in London for the isolation of this disease, which in the popular mind is regarded as an almost extinct rarity in this country. But the fact is that London always contains a sprinkling of lepers who go about their daily work without doing harm to anyone and without their neighbors being aware of the fact. Some of them are clerks working in city offices; others perform a certain amount of manual labor, and several leper children regularly attend the London county council schools. According to Sir Jonathan Hutchinson there are never fewer than 100 cases of leprosy in England and now there are probably 50 in London. The presence of the disease is always concealed by the patients and their physicians do not reveal it because of the popular prejudice against the disease. It always occurs in persons who have been abroad and lived in leprous districts. No case of contagion in England is known. Sir Jonathan Hutchinson, who has always taught that the leprosy is not contagious, has had under his care for the last 10 years a boy suffering from the disease. The lad is now nearly 20 and has recovered. He went to school in London and is now working in an office.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, June 17, 1910.

Protest Against the Disorders in the Concours

The council of the Lyons medical college, the Société des médecins des hôpitaux de Paris, and the Syndicat médical de Paris, like the professors of the Paris college of medicine, have voted their disapproval of the disorders which took place at the last concours de l'agrégation. The syndicate has resolved that the question of the reform of medical instruction ought to be seriously studied by the minister of public instruction and ought to be solved as soon as possible by a commission comprised of equal numbers of professors and of practicing physicians.

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Dedication of Pasteur Monument at the Higher Normal School

When the Pasteur monument in Paris was erected a few years ago by public subscription, the cost of the monument did not entirely absorb the funds. At the suggestion of Dr. Roux and the family of Pasteur this remainder was offered to the Ecole Normale Supérieure for a modest memorial to the great scientist in the school rendered illustrious by his own works. After having taught in the scientific schools of Strasburg and of Lille, in 1867 Pasteur entered the Paris normal school as director of scientific studies, and remained there until he established the Pasteur Institute in 1889. Most of Pasteur's great discoveries issued from the modest laboratory of the normal school on the rue d'Ulm, near which the monument stands. The dedication took place on June 5.

Return of the Charcot Mission

The mission for the study and exploration of the Antarctic regions directed by Dr. Jean Charcot, son of the celebrated neurologist, has just returned to France. The program laid out for the expedition by the Académie des Sciences included exploration of that region of the Southern Pacific included between the meridians of South America and New Zealand and the study of meteorology, terrestrial magnetism, marine currents and natural history of this unknown region.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, June 9, 1910.

The Death of Robert Koch

The wave of excitement set in motion by the death of our gifted bacteriologist and hygienist has not yet subsided. In consequence of the importance of this pioneer investigator, medical societies as well as the press and society in general are still engrossed with this most significant event of the last week. The ashes of the dead scientist, cremated in Baden-Baden, have been brought to the Institute for Infectious Diseases, which was the place of his labors for the last decade, and they will be permanently installed in a room which, with the permission of the national authorities, is to be converted into a mausoleum for Koch. In this room also there will be placed the bust, contributed by his pupils on his sixtieth birthday, his works and other memorials. A memorial room will be produced, similar to the one which has been provided for Pasteur in his Paris institute. In order to avoid a large number of single memorial services in the various societies of which Koch was an honorary member, a committee has been formed which is preparing a single memorial service for all these bodies in common. The date for this celebration has been postponed to December 11 of this year, which will be the sixty-seventh birthday of Robert Koch; this resolution has been taken because, as is generally understood, in the next few weeks many of the persons who would be interested in this memorial will be away from home and, moreover, because representatives from foreign countries are expected at the celebration (particularly from America, an expectation which we hope will not be disappointed), and finally because Koch himself wished a quiet interment. The memorial address at the proposed service will be delivered by Gaffky, the oldest pupil of Koch and his successor in the directorship of the Institute for Infectious Diseases. Gaffky is also chairman of the committee, which includes in addition a large number of prominent Berlin physicians.

Mortality in Prussia in 1908

In 1908 362,259 males and 331,465 females died in Prussia. In addition there were reported 21,876 still births of the male sex and 16,908 of the female. Without reference to the still births the mortality rate per thousand on Jan. 1, 1908, was 18 (for males, 19.1; for females, 17). This figure is the most satisfactory since the institution of uniform vital statistics (quite as good as the two preceding years).

Warning Against Selecting the Medical Profession

The Leipsic league has lately again undertaken to dissuade the graduates of our secondary schools from undertaking the study of medicine. In the circular issued for this purpose it is noted that in 1908 only 618 places could be placed at the disposal of 898 physicians who were seeking localities to practice through the intermediation of the league. In that year only 6,000 persons were studying medicine, but the number of students of medicine has risen continually since 1905, from 6,080 in 1905 to 8,568 in 1908-09, and in the summer semester of 1909 to 9,509. That the income of German physicians is quite small has been recently shown by a statement of the statistical bureau of Saxony. According to this, in the entire kingdom of Saxony 34.8 per cent. of the physicians had not yet an annual income of $1,050 (4,300 marks), and only 44.8 per cent. of the physicians received more than $1,500 (6,300 marks). In this calculation of the income the professional expenses have been deducted, but on the other hand the income from private property of man and wife and all other outside sources are included. These economic conditions will become even worse after the introduction of the new imperial insurance law, for then all persons who have an income of $500 (2,000 marks) and under will be entitled to sick insurance. This means that in Prussia, for instance, 92 per cent. of the population will belong to the Krankenkassen.

Lactation in the Blazek United Twins

Considerable scientific interest has been aroused over the phenomena of lactation in the united Bohemian twins, the Blazek sisters, one of whom was delivered recently of a boy at Prague (mentioned in the Vienna letter April 28). The father of the child is the manager of the two sisters, who has exhibited them to the public for several years. The Blazek twins form a pygopagus; that is, twins joined at the buttocks; all the organs of the trunk are duplicated, except that the rectum and the introitus vaginæ are in common. Formerly the sisters menstruated for a four to five day period. During pregnancy the menses ceased in the pregnant woman, while the other sister menstruated regularly until the last two months before the birth. It is remarkable that lactation set in not only in the woman who was delivered but also in her sister. Dr. Basch, who examined the sisters in the Prague hospital, reports this fact and its explanation in the last number of the *Deutsche medizinische Wochenschrift*. (Trunceeck and Baudouin also discuss the teratologic aspect of the case in the *Semaine Médicale*, May 18.) Basch regards the influence of the sympathetic nervous system on the secretion of milk as small. The rôle of the sympathetic is especially shown in the transmission of reflexes in sucking or milking which are necessary to a uniform continuous activity of the mammary glands. The essential specific activity of the mammary glands is independent of the nervous system. According to Basch, the growth of the breasts is occasioned by stimulant substances which are present in the ovary after impregnation, while the initiation of the secretion of milk is brought about by stimulating substances which may be obtained from the expelled placenta. According to his opinion the secretion of milk in the non-pregnant twin is to be explained by the fact that we have to do with two individuals living in parabiosis in whom the necessary stimulus to the production of lactation generated by the pregnant sister was carried by the common blood stream to the other sister with positive effect. Whether this idea will be sustained by other investigators remains to be seen.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, June 3, 1910.

The Weather in May and Public Health

This last month of May was most unusual on account of the weather and its effects on the general health. The first half of the month was characterized by excessive rainfall, which exceeded that in any month of May since reliable records have been kept in this country (1775). It amounted to 184 mm. Nevertheless, the general health was excellent, especially among children. A complete absence of gastro-intestinal disturbance was noted, and also among the adults. Vital statistics for this period show remarkably favorable figures. When on May 15 fine weather set in and continued without interruption till the end, with high summer temperature, at once the number of diseases went up by leaps and bounds; summer diarrhea set in and numerous infectious diseases were reported, especially pertussis, measles and diphtheria. In adults disturbances of the respiratory organs were common. Another remarkable feature was the belated appearance of the so-called hayfever, which in this country generally is observed already in the last days of April, while this year the most dangerous time for these poor patients, the budding of chestnuts, passed off without much harm to them. Furthermore, the wet weather at the beginning of our summer has caused enormous numbers of mosquitoes, which for many years were not found around Vienna, to invade all country places, so that at present they are veritable pests in such places. No appreciable influence has been hitherto noticed on the appearance of epidemic cerebrospinal meningitis and poliomyelitis, which have been seen sporadically during the winter. It was feared that the moist weather would cause a rise in the number of those cases, but hitherto, luckily, nothing of this kind has happened.

Report of Vienna General Policlinic

The report of the Policlinic in Vienna contains the following interesting figures: In 1909, not less than 76,950 new patients were admitted, 5,000 more than 1908. Of these 5,011 were patients who stayed 52,133 days altogether in the wards. Besides, 854 children were admitted, 17,000 minor operations were performed in the out-patient departments, while 970 major operations were performed on the in-patients. The mortality of the operations was only 5 per cent., while the mortality of the entire hospital was 10.5 per cent.; 59 per cent. of the patients were discharged cured. An interesting feature was the fact that diphtheria, of a light nature only, was observed, the mortality being 4 per cent. This is quite unusual and must be ascribed only to an accidental influence, as otherwise the mortality is from 8 to 12 per cent., even with antitoxin, which is here the routine treatment. The expenditure exceeds the income by 51,000 kronen, so that the deficit is keenly felt. There were altogether 220 students (mostly duly qualified doctors) in the wards and out-patient departments; 60 per cent. were English or American, and a good many lectures were delivered in English. The medical staff of the Policlinic, which comprises special professors for all branches of medicine, numbers 21 professors and 80 physicians and assistants. The hours of attendance on the patients vary from 8 a. m. till 8 p. m., so that during practically all the day specialist help is available for all patients and diseases.

Pharmacology

PHARMACEUTICAL MANUFACTURERS AND THE GREAT AMERICAN FRAUD

How Pharmaceutical Houses Aid and Abet the Nostrum Evil

At various times we have given more or less complete accounts of the prosecutions the United States Government has brought against nostrum exploiters under the Food and Drugs Act. One of the more recent of these, while of comparatively little interest *per se* is of importance to the medical profession, because of certain elements connected with it. The case is known technically as "Notice of Judgment No. 284" and deals with the "Alleged Misbranding of Danderine." The gist of the case is as follows: Casks of Danderine—a widely advertised "hair tonic"—were shipped in carload lots from Michigan to West Virginia, where the product was bottled, labelled and put in condition to be retailed. Danderine contains a percentage of alcohol which, while given on the labels of the bottles in which it is sold, was not stated on the casks in which the preparation was shipped in bulk. The government sought to confiscate, under the Food and Drugs Act, 65 casks thus shipped because the quantity or proportion of alcohol in the casks was not stated. The Knowlton Danderine Company resisted the confiscation and the court upheld the company's claim.

The point in this case which is—or should be—of interest to the medical profession is to be found in the "statement of facts" presented by the Knowlton Danderine Company in its own defense. Here it is said that: "Parke, Davis & Co., who are mentioned in the said libel as shippers . . . are under contract with the said Knowlton Danderine Company . . . to compound the said formula . . ." Elsewhere it is stated: "Parke, Davis & Co. were . . . the manufacturing agents, under contract, of the owner, the Danderine Company . . ."

This evidently means that Parke, Davis & Co., who are generally supposed to manufacture only "ethical" preparations—proprietary or otherwise—and as such to desire the respect and good wishes of the medical profession, are in the business of furnishing the supplies for nostrum vendors. What Danderine is, it is hardly necessary to specify. The widely distributed advertisements of this "hair tonic" nostrum with the slogan: "Danderine Grows Hair and We Can Prove It" are sufficiently well-known to all who read to make a lengthy disquisition on the product unnecessary.

It is interesting in this connection to note that according to newspaper dispatches the Danderine Company has absorbed the Sterling Remedy Company, which exploits "Cascarets." Three years ago a physician, who is also a pharmacist, wrote to the *Medical World* regarding the manufacture of Cascarets:

". . . I have positive evidence, which I will gladly submit, that P., D. & Co., make all of them [Cascarets], and that they have a contract with the Cascaret people not to make anything similar for any one else."

In the circular which comes in the Danderine packages two other "specialties" are advertised: "Neuralgine" for "sick, weak, tired nerves" and "Drake's Palmetto Compound" for "weak stomachs, sluggish livers, disordered kidneys" and various other derangements of the system. The question naturally arises, are these, too, shipped in casks from Parke, Davis & Co., and merely bottled and labelled in West Virginia?

Not that the Danderine case is the first one in which Parke, Davis & Co. have been exposed as manufacturers of nostrum supplies. "Vitaopathy" a method of "treatment" practised by the notorious New York Institute of Physicians and Surgeons in the person of "Prof." Adkin and apparently consisting of "absent treatment" and pills, was finally put out of business by a fraud-order from the post office department. The concern used to advertise:

"In Professor Adkin's laboratory, his chemists are daily engaged in extracting the life-and-health-giving principle from rare vegetables, fruits and plants."

"Prof." Adkin had no laboratory; his chemists, according to the government report, were Parke, Davis & Co., from whom he purchased the tablets which formed part of his stock-in-trade of quackery.

The Nutriola Company of Chicago was declared fraudulent by the postal authorities and a full account of the methods of this fake medical concern appeared in THE JOURNAL, April 28, 1906. Nutriola was advertised as:

"The greatest Chemical-Medical Preparation ever prepared by the skill of man."

"Nutriola and Nature are the only invincible conquerors of diseases ever known."

The promoter of this scheme was one Edward F. Hanson, who was questioned by the government inspectors regarding the manufacture of the Nutriola nostrum. Quoting from the government report:

"Q. Please name the chemists who now manufacture the remedies of the Nutriola Company."

"A. Parke, Davis & Company, Detroit; E. L. Patch Manufacturing Company, Stoneham, Mass.; Seabury & Johnson, New York."

Not that the course pursued by Parke, Davis & Co. is by any means an exceptional one in the pharmaceutical world. It may be recalled that THE JOURNAL has previously referred to the fact that Sharp & Dohme are reported to make or to have made the "Getwell Tablets" for the "patent medicine" concern which exploits the nostrum; and that Frederick Stearns & Co. make or did make the widely advertised "cures" Shac and Zymole Trokeys also has been mentioned. That Seabury & Johnson made preparations for a fake medicine concern was brought to light by Mr. Adams in the "Great American Fraud" series. And unquestionably there are many others. The attitude taken by such houses seems to be that they are willing to furnish anything in the pharmaceutical line that anyone is willing to pay for, whether it is for legitimate use of the physician or pharmacist or for furthering the business by which the ignorant or gullible sick are humbugged and defrauded.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

MOTHERSILL'S SEASICK REMEDY

W. A. Puckner and W. S. Hilpert

While, from published analyses, the composition of such classes of proprietary remedies as cough cures, headache-powders, etc., has become well known, very little has appeared regarding the nature of nostrums advertised to prevent seasickness. For this reason the examination of Mothersill's Seasick Remedy, as an extensively exploited representative of this class, was undertaken in the Association laboratory. The manufacturers, "Mothersill Remedy Co., Ltd., Detroit," send

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out circulars containing the most extravagant and sweeping statements regarding the efficacy of their remedy. For instance:

"The only remedy which stops instantly and prevents, in every case, when taken according to directions, seasickness, carsickness and nausea caused by motion, climbing, etc."

". . . it is a great stomach strengthener."

"No bad after-effects are ever produced by this remedy."

"Mothersill's Seasick Remedy has never been known to fail in a single case."

These statements are backed by the "guaarantee" of the manufacturers as follows: "We guarantee the successful action of Mothersill's Seasick Remedy in every case."

Further to inspire confidence, an analytical report and testimonials are included in the advertisements. The chemist reports that he found neither "opium, morphin, cocain or any other alkaloid——." The testimonials are principally in the form of reprints from newspapers, mostly of English origin, and are as lavish in their praise of the remedy as the firm's own advertisements.

The preparation, as purchased on the market, comes in small boxes containing sixteen capsules, half of them containing a pink powder and the remainder a brown powder. The capsules are wrapped in tin-foil and packed with a circular and the reproduction of the analyst's report mentioned above. The cover of the container bears the name and manufacturer of the preparation with statements as to its use. The under side of the box bears the "guarantee" and special directions for the use of the remedy in the Irish and the English channels.

The pink powder possesses an odor resembling camphor, and when placed on the tongue produces a slight anesthesia. It is partly soluble in water and partly in chloroform. Qualitative examination[1] indicated the presence of chlorbutanol (acetone-chloroform; chloretone; methaform), caffein, milk-sugar and a fatty acid. Quantitative analysis demonstrated that 100 parts of the material contained approximately:

Chlorbutanol	46.1 per cent.
Caffein	7.9 per cent.
Milk-Sugar	27.0 per cent.
Fatty acid	18.2 per cent.
Undetermined	0.8 per cent.

The brown powder possessed the same general properties as the pink and was found to contain chlorbutanol, caffein, powdered cinnamon and a fatty acid. The quantitative analysis showed that 100 parts of this brown powder contained approximately:

Chlorbutanol	45.6 per cent.
Caffein	8.3 per cent.
Cinnamon, powdered	24.8 per cent.
Fatty acid	20.3 per cent.
Undetermined	1.0 per cent.

From the above it will be seen that the chief constituent of this preparation is chlorbutanol, a substance some years ago introduced as a substitute for cocain and used as a local anesthetic: it has been recommended as a preventative of nausea.

EDITORIAL NOTE: It is evident from the analysis that in this nostrum we have but another example of a scheme that is as old as quackery itself—selling a well-known remedy under another name and investing it with virtues that are little short of miraculous. While chlorbutanol—better known under the proprietary names of chloretone and methaform—has been used to some extent and with a limited degree of success in the treatment of sea-sickness, it is evident that if it were the marvelous specific against *mal de mer* that the exploiter would have us believe, its use would long ago have become universal. This nostrum, like all others, depends for whatever popularity it may have on several factors. The first, and largest, is the universal tendency to give any therapeutic agent—worthy or worthless—the credit that rightly belongs to beneficent Nature. Second is the psychic element, which is enhanced by the exaggerated but very positive claims that are made for all nostrums, strengthened by the fact that the victim is paying ten times more than the thing is worth. The element of suggestion is still further augmented by the device of administering two powders of different colors containing essentially the same substances. Last, and least, the fact that the principal ingredient has a therapeutic value in selected cases.

1. The details of the analysis will be sent on receipt of a stamped, addressed envelope; they will also be published in the annual report of the Chemical Laboratory.

Correspondence

Snake Poisoning—A Case of Plagiarism

To the Editor —My attention has just been called to an article entitled "Practical Consideration of Snake Poisoning," by Benjamin H. Orndorff, B.A., M.D.," Instructor in Pathology, Chicago College of Medicine and Surgery, Pathologist to Frances Willard Hospital, Chicago." This article was published in the *Medical Standard*, Chicago, September and December, 1909, pages 476 to 481 and 637 to 640. There was published by me in the *Archives of Internal Medicine*, Chicago, volume 1, June, 1908, pages 516 to 570, a paper entitled "Snake Poisoning in the United States; a Study Based on an Analysis of 740 Cases." This paper was the result of a large amount of work, which involved not only an examination of the literature but a collection, by correspondence with physicians practicing in the South, of a considerable number of unpublished cases. This article was commented on editorially by THE JOURNAL, July 11, 1908, page 132, and later reviewed in the Department of Therapeutics (THE JOURNAL, Aug. 8, 1908, p. 498).

The article by Dr. Orndorff, mentioned above, seems to be based almost entirely on my article published in the *Archives of Internal Medicine*. The outline and the division of the subject are identical. Not only paragraphs, but whole columns are exactly and literally quoted—without quotation marks. The conclusion and summary of my article, divided into ten numbered paragraphs, has been appropriated as a whole, without change and again without quotation marks. Dr. Orndorff makes absolutely no mention of my communication, gives absolutely no credit. Indeed, in one of the few paragraphs not taken bodily from my paper he states (in substance) that his article is based on a careful study of the literature!

It would seem that such a flagrant case of plagiarism as this should not go unnoticed, constituting, as it does, a disgrace to medical journalism. I trust THE JOURNAL will see its way clear to compare the two articles mentioned. Any comment it might see fit to make would be appreciated.

PRENTISS WILLSON, M.D., Washington, D. C.

[Proof of the above letter was submitted to Dr. Orndorff, who replies:]

The article is a publication of abstracts taken from several original articles appearing in current literature. These abstracts I prepared to assist me in giving a lecture on the subject and were intended to be the basis of an article for publication; however the abstracts, as they stood, appeared in the *Medical Standard* without my seeing a proof sheet for approval, indeed, the first portion appeared while I was in Europe, the second about fifteen days after my return.

All credit to the men writing the original articles was unfortunately omitted and the publication, as it stands, appears as a clumsy combination of plagiarism and ignorance on the part of the author. While I am certain there is nothing I can say or do that will amend the injustice inflicted on the men whose brains have developed the material from which these abstracts were taken, still it would please me to state in the columns of THE JOURNAL of the American Medical Association that the most excellent monograph by Dr. Prentiss Willson, "Snake Poisoning in the United States; a Study Based on the Analysis of 740 Cases," appearing in the *Archives of Internal Medicine*, June, 1908, furnished the outline and much of the information found in my abstracts, while the summary and conclusion were copied entirely.

On receiving the reprints from this publication, I immediately observed the unfortunate state of affairs, and personally called at the office of the *Standard* to negotiate for another set of reprints which should contain the two omitted paragraphs, quotation marks and many other corrections, hoping that by the corrected print I might offset in a small

measure the gross mistakes. On learning the cost of such alterations, I decided to ignore the entire affair and to dispose of the reprints without distribution.

In conclusion I wish to express my profound regret for this mistake and trust that this explanation and apology may serve as a slight atonement of the injustice imposed on these men, for whose labor I possess the highest regard.

B. H. ORNDORFF, M.D.

[COMMENT: We suggest that those who are interested in the subject of journalistic plagiarism should examine the two articles. They can then decide for themselves whether or not the explanation explains.]

Hay-Fever Not a Contraindication to Antitoxin

To the Editor:—The note in the Medicolegal department (June 18, 1910, p. 2094), in regard to the use of tetanus antitoxin on patients who have hay-fever, leads me to say that I have used the antitoxin as a prophylactic measure on several occasions. Many patients have suffered in varying degree from hay-fever, yet in no case have I seen any untoward effect follow its use.

I myself suffer severely from hay-fever during August and September of each year. Last September I received an injury which made it seem wise to use a single large injection of the antitoxin. At the time I was suffering severely from hay-fever. I suffered no inconvenience whatsoever following the injection.

There is at times so much at stake as a result of injuries which tetanus may complicate, and prophylactic treatment is so very satisfactory, that I should not in the least hesitate either to use the antitoxin on a hay-fever patient or to have the antitoxin used on myself as frequently and in as large doses as might seem to be useful.

EDWARD M. COLIE, JR., M.D., New York.

A New Word for Vaccine

To the Editor: There is need of a new descriptive word in our nomenclature. "Vaccine," from *vacca*, "a cow," is a misnomer when applied to serums taken from any other source, man, horse, goat, guinea-pig or rabbit; and doubtful, if a culture is made from a broth. We need a word which defines the character of the remedies now so much used as antidotes. We reverse the old dictum of the homeopathic school: "Similia similibus curantur," and say "Like kills like;" and this likeness of remedy to disease should be asserted.

My own suggestion for the new word is "viroid," i. e., like the virus for which it is the antidote. This name is distinctive, and it follows the analogies of medical language. It claims to combat a disease with its specific antidote. "Viroid" would be the name of the type of remedy, and a prefix would define the special remedy.

We may hope before long to have in use a pneumonia viroid, an influenza viroid, a scarlatina viroid, as we have now a rabies viroid.

"Antitoxin," by popular and professional use, is assigned to diphtheria. Itself a cumbrous word, any prefix or combination would make it worse. "Viroid" is definite, is descriptive, and is an easy helpmate when yoked with any named disease. HENRY FREEMAN WALKER, New York.

Miscellany

Constriction Hyperemia in Local Prophylactic Treatment of Rabies.—Fermi and Cano report that the results of their experimental research suggest the possible advantage of applying a constricting elastic band, according to Bier's technic, to a limb that has been bitten by an animal suspected of rabies. Fermi applied the constriction from 1 to 4 or even 5 hours after injection of a 1 per cent. emulsion of fixed virus and maintained it for from 1 to 12 hours. All the animals thus treated survived, while the controls all died. Cano reports from Suez that in similar experiments 8 of the 9 dogs survived, that is 88 per cent., while only 55 per cent. were saved out of 9 rabbits and dogs treated by searing the lesion with a hot iron. Fermi also was able to save only 50 per cent. of those treated with the hot iron. Cano's report is published in the *Centralbl. f. Bakt.*, March 2, 1910, liv, page 37.

Diagnosis of Morphin Addiction by the Leucocytes.—Achard, Bénard and Gagneux state that it is possible by examination of the leucocytes to recognize morphin intoxication, to supervise the effects of treatment of morphin addiction and to distinguish between morphin and heroin intoxication. In their communication on the subject in the *Bull. Soc. Méd. des Hôp. de Paris*, 1910, xxxvi, 958, they relate a number of experiences with clinical, experimental and chemical tests showing the action of morphin on the leucocytes. The resisting power and activity of the leucocytes are rapidly reduced by injection of morphin except in those accustomed to the drug; in them there is no modification of the leucocytes after a test injection of morphin. The properties of the leucocytes are determined by the cytolytic action of a hypotonic salt solution; the mechanical activity being determined by their capacity of absorption of a stain (neutral red) or of foreign bodies (sterilized thrush fungus). The findings in 42 cases are given in detail.

Blister Method for Transplanting Epidermis.—A. Tedeschi had occasion to treat a patient with extensive burns who refused to permit Thiersch flaps to be taken from elsewhere to cover the defect. After excluding kidney trouble, Tedeschi applied a caustic to the skin over the desired area for a few hours and then cut the skin of the resulting blister to use for flaps, which he was able to make of the exact size and shape desired. The defect thus covered with the flaps was protected with perforated rubber tissue with moist gauze above. In his communication on the subject in the *Semana Medica*, 1910, xvii, 247, he states that the results were very good. The superficial layer of the transplanted flaps was thrown off in a few days, but the epithelial layer left soon grew to cover the raw area under the usual measures.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

VERMIN AS CARRIERS OF DISEASE

To the Editor:—Please give references to literature on common insects and animals as carriers of diseases to man.

S. E. WOODY, Louisville, Ky.

ANSWER.—Giles: Gnats and Mosquitoes, William Wood & Co.
Levy: The Extermination of Mosquitoes, W. B. Saunders Co.
Mitchell: Mosquito Life, G. P. Putnam's Sons.
Ross: Mosquito Brigades and How to Organize Them, Longmans Greene & Co.
Herzog, M.: The Plague; Bacteriology, Morbid Anatomy and Histopathology, Including a Consideration of Insects as Plague-Carriers, Dept. of the Interior, Bureau of Government Laboratories, Manila, 1904, No. 23.
Merriam, C. H.: California Ground-Squirrels, U. S. P. H. and M.-H. Service, Washington, 1910.
Rosenau, M. J.: Disinfection Against Mosquitoes with Formaldehyd and Sulphur Dioxid, Bull. 6, Hyg. Lab., U. S. P. H. and M.-H. Service, Washington.
Stiles, C. W.: A Zoologic Investigation into the Cause, Transmission and Source of Rocky Mountain "Spotted Fever," Bull. 20, U. S. P. H. and M.-H. Service, Washington.
The Rat and Its Relation to the Public Health, U. S. P. H. and M.-H. Service, 1910.
Weber, S. E.: Dissemination of Tubercle Bacilli by Insects, *New York Med. Jour.*, Nov. 3, 1906; abstr. in THE JOURNAL A. M. A., Nov. 17, 1906, p. 1683. Also editorial in THE JOURNAL A. M. A., Dec. 29, 1906, p. 2164.
Editorial: The Control of Insect-borne Diseases in the Army, THE JOURNAL A. M. A., Aug. 3, 1907, p. 421.
Lloyd, B. J.: The Rat and His Parasites in the Spread of Disease, Especially Bubonic Plague, *California State Jour. Med.*, April, May and June, 1907.

Sofer, L.: Transmission of Disease by Insects, *Therap. Monatsh.*, April, 1908; abstr. in THE JOURNAL A. M. A., May 16, 1908, p. 1659.

Verjbitski, D. T.: Insects in the Epidemiology of Plague, *Jour. Hyg.*, London, May, 1908; abstr. in THE JOURNAL A. M. A., Aug. 15, 1908, p. 628.

Dutton, W. F.: Insect Carriers of Typhoid Fever, THE JOURNAL A. M. A., Oct. 16, 1909, p. 1248. This article is accompanied by a full bibliography.

Some valuable information on this subject can be obtained from the Reports of the Wellcome Research Laboratories Bureau, published by the Department of Education, Sudan Government, Kartoum.

THYMINIC ACID

To the Editor:—Where can I obtain thyminic acid, which has been used apparently with success in gout by Dr. Fenner of England? I cannot find it listed in any catalogues of American drug houses. 2. Has it been used in this country with any success?

F. H. NORWOOD, Prague, Okla.

ANSWER.—1. Thyminic acid is also known under the name "solurol," a name which was given to it by its discoverer, Minkowski, and which appears not to be proprietary. We presume it can be obtained through the regular channels of the drug trade.

2. An article describing the use of thymic acid in gout by E. Schmoll, appears in THE JOURNAL, April 29, 1905, p. 1348, but we find no reference to it in American literature since that time. Schmoll treated about 30 patients with it with favorable results. The term thymic acid as used by Schmoll refers to the substance which is more properly known as thyminic acid. A general account of this substance was given in THE JOURNAL, Aug. 22, 1908, p. 692. In an article on "The Pathology and Therapy of Gout" (*Therapie der Gegenwart*, February, 1909), F. Umber makes the following statements: "We have used solurol in gouty patients with exact observation of the metabolism without any clinical effect and without any effect on the curve of uric acid excretion." It is well to remember, as Umber remarks, that there is scarcely any so-called gout remedy which has not been credited by this or that author with brilliant success.

The Public Service

Medical Department, U. S. Army

Changes for the week ended June 25, 1910.

Oliver, Robert T. E. S. D., surgeon, returned to Fort Hamilton, N. Y., from temporary duty at Fort Hancock, New Jersey.

Griffin, F. C., M. C., left station with 4th Field Artillery to Fort D. A. Russell, Wyo, Target and Maneuver Reserve.

Long, Charles J., dental surgeon, reports for temporary duty at Fort Andrews, Mass.

Gunckel, George L., dental surgeon, reports for temporary duty at Fort Screven, Ga., left Fort Sarrancas, Fla., June 10, 1910.

Ferenbaugh, Thomas L., M. R. C., reported at Fort D. A. Russel, Wyo., for temporary duty.

Gray, William W., col., reported for duty as Chief Surgeon, Headquarters Department of Dakota, St. Paul, Minn.; left St. Paul, Minn., June 18, 1910, on 30 days' leave of absence.

Oliver, Robert T., E. S. D. S., will proceed to the camp of instruction to be held at Gettysburg, Pa., to arrive July 1 for dental service during the encampment.

Hall, William E., M. R. C., on arrival at San Francisco, will proceed to Whipple Barracks, Ariz., for station.

Clark, John A., capt., on arrival at Seattle, Wash., will proceed to Plattsburg Barracks, N. Y., for station.

Roberts, William M., major, granted 3 months' leave of absence.

Pinkston, O. W., capt., reported for temporary duty at Fort D. A. Russel, Wyo.

Gosslin, Bernard S., lieut., honorably discharged from the service of the United States.

Ekwurzel, George M., major, left Fort MacKenzie, Wyo., on 10 days' leave of absence.

Lynch, Edward C., M. R. C., ordered to active duty in the service of the United States, and will proceed to Fort D. A. Russel, Wyo., for station and duty.

Warriner, R. B., M. R. C., granted 10 days' leave of absence.

Banister, William B., lieut. col., will, in addition to his duties at Fort Snelling, Minn., take charge of the office of chief surgeon, Department of Dakota, St. Paul, Minn., during the absence of Colonel William W. Gray, Medical Corps.

Sharpe, Herbert H., M. R. C., ordered to proceed from Fort Jay to Fort Niagara, N. Y., for temporary duty.

Holmes, R. W., M. R. C., left Plattsburg Barracks, N. Y., on 10 days' leave.

Clark, John A., capt., granted leave of absence for 1 month.

Coffey, Albion McD., M. R. C., granted leave of absence for 1 month.

Coe, Henry C., M. R. C., ordered to active service and will proceed to Camp of Instruction, Gettysburg, Pa., for duty.

Hughes, Leonard S., M. R. C., ordered on expiration of his present leave of absence to proceed to Fort D. A. Russel, Wyo., for station and duty.

Pinquard, Joseph, M. R. C., granted leave of absence from June 22 to Sept. 9, 1910, at which date he is honorably discharged from the service.

Long, Charles J., dental surgeon, ordered to proceed at the proper time to Pine Camp, Jefferson County, N. Y., for dental service during the Camp of Instruction.

Snyder, Henry D., major, granted 30 days' leave of absence; ordered to proceed to New York City, on official business pertaining to the Medical Department of the Army.

Medical Corps, U. S. Navy

Changes during the week ended June 25, 1910:

Woodland, E. E., acting asst.-surgeon, appointed acting asst.-surgeon from June 18, 1910.

Fitts, H. B., medical inspector, detached from command Naval Hospital, Pensacola, Fla., and ordered to continue other duties.

Pryor, J. C., surgeon, ordered to command the Naval Hospital, Pensacola, Fla.

Shipp, E. M., surgeon, detached from the Naval Recruiting Station, N. Y., and ordered to the Naval Medical School Hospital, Washington.

Asserson, F. A., surgeon, detached from the Naval Hospital, Portsmouth, N. H., and ordered to duty at the Naval Hospital, Boston.

Heiner, R. G., P. A. surgeon, ordered to duty at the Naval Hospital, Norfolk, Va.

Haynes, J. P., surgeon, detached from the Navy Yard, Norfolk, Va., and ordered to the Naval Recruiting Station, and the Naval Station, New Orleans.

Stuart, A., P. A. surgeon, ordered to duty at the Naval Hospital, Boston.

Jenness, B. F., P. A. Surgeon, detached from the Naval Recruiting Station, Buffalo, N. Y., and ordered to the Naval Hospital, Portsmouth, N. H.

Howard, J. V., A. A. surgeon, ordered to duty at the Naval Hospital, Philadelphia.

Gatewer, C. C., A. A. surgeon, ordered to duty at the Naval Hospital, New York.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended June 22, 1910:

Glennan, A. H., assistant surgeon-general, granted 1 month's leave of absence from July, 1910.

Cofer, L. E., assistant surgeon-general, granted 4 days' leave of absence from June 22, 1910.

Wertenbaker, C. P., surgeon, granted 4 days' leave of absence from June 27, 1910.

Wille, C. W., P. A. surgeon, detailed to attend the joint meeting of the Ohio State Board of Health with local boards of health to be held in Cleveland, Ohio, June 30-July 1, 1910.

Long, J. D., P. A. surgeon, relieved from duty in the Hygienic Laboratory and detailed for duty in the Bureau as assistant surgeon-general in charge of the Division of Domestic (Interstate) Quarantine, effective June 16, 1910, Paragraph 12, Service Regulations.

Stimson, A. M., P. A. surgeon, granted 4 days' leave of absence from June 15, 1910, under Paragraph 191, Service Regulations.

Roberts, Norman, P. A. surgeon, granted 1 day's leave of absence June 13, 1910, under Paragraph 191, Service Regulations.

Frost, W. H., P. A. surgeon, granted 2 days' leave of absence en route to station.

Mullan, E. H., P. A. surgeon, granted 13 days' leave of absence from June 17, 1910.

Stiles, C. W., Professor, Chief Division of Zoology, Hygienic Laboratory, detailed to attend the annual meeting of the Medical Society of North Carolina, to be held at Wrightsville Beach, June 23, 1910.

Delgado, J. M., acting asst.-surgeon, granted 26 days' leave of absence from July 1, 1910.

Houch, J. Spencer, acting asst.-surgeon, granted 30 days' leave of absence during the calendar year, 1910.

Hunter, W. R., acting asst.-surgeon, granted 10 days' leave of absence from June 18, 1910.

O'Neill, A. A., acting asst.-surgeon, granted 3 days' leave of absence without pay from June 10, 1910, under Paragraph 210, Service Regulations.

Marriages

ROBINSON BOSWORTH, M.D., Calais, Me., to Miss Mary Neill of Boston, June 21.

JOHN MERLIN ALFORD, M.D., Galva, Ill., to Miss Shirley Foote of Chicago, June 17.

CHARLES OGILVY, M.D., to Miss Evelyn Hunter, both of New Rochelle, N. Y., June 15.

LOUIS ROSENTHAL, M.D., to Miss Elizabeth Kass, both of New York City, June 7.

CHARLES WILSON DOUGHTIE, M.D., Norfolk, Va., to Miss Alice Glenn Smith, June 18.

WILLIAM F. BEITSCH, M.D., to Miss Mabel McDanel, both of New Brighton, Pa., June 14.

HENRY SYMES STINSON, M.D., to Miss Mary H. Broadwell, both of Berwyn, Ill., June 18.

ETTA BARKDOLL, M.D., Greencastle, Pa., and J. Roy Selsam, at Hagerstown, Md., June 11.

WILLIAM GARFIELD FOX, M.D., to Miss Susan Lucretia Burg, both of Lancaster, Pa., June 21.

THOMAS WORTH KELLER, M.D., to Miss Hannah B. Jones, both of Pittsburg, Pa., recently.

FRANCIS C. GOLDSBOROUGH, M.D., to Miss Mollie Pitcher Cook, both of Baltimore, June 8.

WILLIAM ROY ELGIN, M.D., Ruleville, Miss., to Miss Zerah Harpole of Europa, Miss., June 11.

CHARLES F. DANIELS, M.D., Tiffin, Ohio, to Miss Olga Mary Hierholzer of Celina, Ohio, June 14.

HOWARD T. CLARKE, M. R. C., U. S. Army, to Miss Elinor L. Tracy, at Fort Thomas, Ky., June 7.

ARTHUR CLARKSON SMITH, M.D., Oakland, Cal., to Miss Algae Margaret Hurd of Lodi, Cal., June 4.

WASHINGTON BUDD SAGER, M.D., Woodstock, Va., to Miss Helen Newman, at Woodstock, June 14.

CHARLES BUTTERFIELD, M.D., Rock City, Ill., to Miss Charlotte Heath of Lawrence, Mich., recently.

JOHN ROYER LAUGHLIN, M.D., Hagerstown, Md., to Miss Myrtle F. Binkley, at Hagerstown, June 15.

WALTER EVERETT DEERING, M.D., Hollywood, Cal., to Miss Lillian Rose Moody, at Hollywood, June 21.

GEORGE WILLIAM KIRMSE, M.D., Frazee, Minn., to Miss Aldine Jacobsmeyer of Clayton, Mo., June 15.

ALFRED CURTIS RICE, M.D., McSherrystown, Pa., to Miss Violet M. Smith, at McSherrystown, June 14.

HAROLD BAILEY, M.D., to Miss Mabelle Rague, both of Charles City, Iowa, at Waterloo, Iowa, June 15.

ALBERT EGE CRAIG, M.D., Washington, D. C., to Miss Azelia DeGrange Jones, at Shepherdstown, W. Va., June 16.

CLARENCE W. RUSSELL, M.D., Lamar, Colo., to Mrs. Abby C. Howe of Laporte, Ind., at Logansport, Ind., recently.

CHARLES HATCH STODDARD, M.D., Milwaukee, Wis., to Miss Eloise Marie Jackson of Birmingham, Ala., June 25.

HARVEY B. SANBORN, M.D., to Miss Bernice Esther Monk, both of Providence, R. I., at Campello, Mass., June 10.

ERNEST L. RUFFNER, M. C., U. S. Army, to Miss Jessie B. Bowen of Buffalo, N. Y., at Mount Vernon, N. Y., June 14.

WILLIAM WORTHINGTON HERRICK, M.D., New York City, to Miss Emily Elizabeth Schwab of Ossining, N. Y., at Scarboro, N. Y., June 15.

Deaths

William Henry Seaman, M.D. (Hon.) Howard University, Washington, D. C., 1883; professor of chemistry and toxicology in Howard University; a fellow of the American Association for the Advancement of Science; corresponding member of the Maryland Academy of Sciences; member of the Biological, Geographical and Chemical societies of Washington; president of the Washington Microscopic Society in 1900, and secretary of the American Microscopical Society from 1891-1894; principal examiner of the United States Patent Office, Washington; died in that city, June 11, from arteriosclerosis and acute cardiac dilatation, aged 72.

John Wesley Tope, M.D. Rush Medical College, 1870; a member of the American Medical Association; a veteran of the Civil War; superintendent of the Asylum for the Insane at Dunning for five years; member of the surgical staff of Cook County Hospital for fourteen years; founder of the Oak Park Hospital; president of the Alumni Association of Rush Medical College; president of the Aux Plaines branch of the Chicago Medical Society; died at his home in Oak Park, June 18, aged 65.

Meyer Herman, M.D. Columbia University, Washington, D. C., 1891; contract surgeon U. S. Army, 1898 to 1901; assistant surgeon, U. S. Volunteers; a veteran of the Spanish-American War, who went to the Philippines with the Thirty-eighth Volunteer Infantry as a captain-surgeon after a season in Cuba combating yellow fever; of Manila; died in St. Paul's Hospital at that place, May 12, from diabetic coma, following an operation for appendicitis, aged 49.

John Francis Bennett, M.D. Michigan College of Medicine and Surgery, Detroit, 1892; a member of the American Medical Association; professor of physical diagnosis and clinical medicine in his alma mater; U. S. pension examining surgeon; a resident of Detroit and coroner of Wayne county; died at the home of an aunt in Northville, Mich., June 19, from valvular heart disease and heat prostration, aged 45.

Jules A. Simon, M.D. University of California, Medical Department, 1875; Faculty of Medicine, Paris, France, 1883; a member of the Medical Society of the State of California; at one time president of the Board of Health of San Francisco; and a member of the staff of Mount Zion Hospital; died from heart disease while ascending Mount Vesuvius Italy, June 8.

E. Rose Dorsett, M.D. Jefferson Medical College, Philadelphia, 1868; a member of the Medical Society of the State of North Carolina; coroner of Rowan county for thirty years; died at his home in Salisbury, June 16, from pericardial effusion, aged 76.

Edward D. Swift, M.D. Louisville (Ky.) Medical College, 1894; a member of the Indiana State Medical Association; of Macy, Ind.; died at Oskaloosa, Kan., where he had gone for his health some weeks ago, June 10, from heart disease, aged 39.

Robert Booth, M.D. University of Michigan, Department of Medicine and Surgery; 1867; a member and chairman of the Millbury, Mass., Board of Health; died at St. Vincent Hospital, Worcester, June 14, from cystitis and heart disease, aged 69.

John Belton O. N. Harrington, M.D. Louisville (Ky.) Medical College, 1879; a member of the Mississippi State Medical Association; of Crawford, Miss.; died at the home of his sister in that place, June 13, from chronic gastritis, aged 57.

Charles Herbert Boxmeyer, M.D. Cornell University Medical College, 1906; at one time state bacteriologist of Florida and later city bacteriologist of Sacramento, Cal.; health officer of Palo Alto, Cal.; died at that city, June 13, aged 34.

David D. Stewart, M.D. Jefferson Medical College, Philadelphia, 1879; a pioneer practitioner of Johnson county, Iowa; a veteran of the Civil War; died at his home in North Liberty, Iowa, June 10, from heart disease, aged 79.

Randall Doyle Bibber, M.D. Medical School of Maine, Brunswick, 1871; a member of the American Medical Association; three times mayor of Bath, Maine; died at his home in that city, June 9, from chronic nephritis, aged 64.

Burwell Philip Goode, M.D. Medical College of Ohio, 1858; a member of the American Medical Association; a practitioner of Cincinnati for fifty years; died at Cincinnati, April 23, from cegebral arteriosclerosis, aged 77.

Wesley A. Cormack, M.D. Eclectic Medical Institute, Cincinnati, 1874; for more than thirty years a practitioner of Cherryvale, Kan.; died at his home in that place, June 9, from heart disease, aged 71.

Randall Williams, M.D. Albany (N. Y.) Medical College, 1848; a practitioner of LeRoy, N. Y., for half a century, and said to have been the oldest physician in Genesee county; died at his home, June 10, aged 85.

Edward Goodell Larrabee, M.D. Dartmouth Medical School, Hanover, N. H., 1909; a member of the staff of the Maine State Sanatorium, Hebron; died at that institution, June 12, from tuberculosis, aged 24.

Robert Newton Hawley, M.D. College of Physicians and Surgeons, New York City, 1879; a veteran of the Spanish-American War; formerly of Milwaukee, Wis.; died at Baltimore, June 13, aged 54.

Levi D. Tebo, M.D. Hahnemann Medical College and Hospital, Philadelphia, 1873; a practitioner of Bordentown, N. J., for thirty years; died in that city, June 14, from cardiac degeneration, aged 65.

Allen P. Mitten, M.D. Rush Medical College, 1867; Bellevue Hospital Medical College, New York City, 1873; formerly of Columbia City, Ind.; died at his home in Seattle, Wash., June 13, aged 65.

William Kennedy Brown, M.D. Jefferson Medical College, Philadelphia, 1845; a practitioner of medicine for sixty years; of Paris, Texas; died at the home of a son in Detroit, Texas, June 9, aged 91.

George P. Yost, M.D. Washington University School of Medicine, Baltimore, 1871; of Glen Rock, Pa.; died at the home of his son-in-law in Baltimore, June 12, from heart disease, aged 62.

John Winthrop Spooner, M.D. Harvard Medical School, Boston, 1871; a member of the American Medical Association; died at his home in Hingham, Mass., June 19, from paralysis, aged 64.

William Ekwurzel, M.D. Jefferson Medical College, 1868; a member of the Medical Society of the State of Pennsylvania; died at his home in Philadelphia, June 18, from heart disease, aged 67.

Ephraim S. Wynn, M.D. Jefferson Medical College, Philadelphia, 1872; of Camden, N. J., and Philadelphia; died at his residence in Camden, June 13, from heart disease, aged 61.

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Thomas H. Ferguson, M.D. Washington University Medical Department, St. Louis, 1867; of Gridley, Cal.; died at the Rideout Memorial Hospital, Marysville, Cal., June 18, aged 73.

W. A. Martin, M.D. Medical College of Georgia, Augusta, 1843; of Cobbham, Ga.; while shaving, accidentally cut his throat so severely that he bled to death, June 12, aged 89.

Elijah Wilson Carney, M.D. Medical Department of Nashville and Vanderbilt University, Nashville, Tenn., 1892; of Shelbyville, Tenn.; died at that place, June 15, aged 40.

Robert A. Hammond, M.D. Jefferson Medical College, Philadelphia, 1876; of Monroe, Ga.; died at his home in that place, June 13, following an operation for appendicitis, aged 58.

Willis Brooks McMichael, M.D. Harvard Medical School, 1881; of Boston; died at the home of his mother in South Newcastle, Maine, June 11, from heart disease, aged 50.

William Eugene Trautwein, M.D. Bellevue Hospital Medical College, New York City, 1890; of New York City; died at his home, June 19, from heart disease, aged 44.

William Hendrik Horsley, M.D. California Eclectic Medical College, Los Angeles, 1900; of Manton, Cal.; died at that place, Oct. 14, 1909, from disease of the liver, aged 50.

Asa C. Wilton, M.D. University of Wooster, Medical Department, Cleveland, Ohio, 1882; died at the home of his sister in Youngstown, Ohio, June 16, aged 61.

Frank Cecil Fenhagen, M.D. College of Physicians and Surgeons, Baltimore, 1875; died at his home in Baltimore, June 13, from nephritis, aged 55.

William Alexander Simmons, M.D. Jefferson Medical College, Philadelphia, 1855; died at his home near Troy, N. C., recently, from nephritis, aged 82.

Henry W. Stork, M.D. Medical College of Evansville, Ind., 1878; died at his home in Holland, Ind., June 3, from cerebral arteriosclerosis, aged 59.

John M. McKnight, M.D. Tulane University, New Orleans, 1872; a confederate veteran; of Laredo, Texas; died at that place, June 19, aged 64.

Lorin North Pontius, M.D. Rush Medical College, 1881; of Canton, Ohio; died at a hospital in Gallipolis, Ohio, June 20, aged 56.

Daniel P. Durst, M.D. Jefferson Medical College, Philadelphia, 1850; died at his home in Wheatland, Cal., June 11, aged 85.

Stephen H. Fuller, M.D. Fort Wayne (Ind.) College of Medicine, 1880; died at his home in Pleasant Lake, Ind., June 21, aged 62.

Society Proceedings

AMERICAN SURGICAL ASSOCIATION

Annual Meeting, held in Washington, D. C., May 3-5, 1910

Operative Treatment of Tumors of the Hypophysis

DR. A. E. HALSTED, Chicago: A survey of the literature on the operative treatment of tumors of the hypophysis shows that many of the procedures proposed are based, not on clinical experiences, but on observations made in the post-mortem room; therefore, the merits of these methods are still unproved. The routes of approach previously advocated have been the intracranial and the extracranial. I propose what I term the oronasal route, which I employed successfully in one case. It is a modification of the infranasal method of approach, but is without the trauma and disfiguration which must follow the König operation.

DISCUSSION

DR. S. J. MIXTER, Boston: In a patient operated on by the route suggested by Kanavel, there was a large cyst in the hypophysis filled with cholesterin and holding about one and a half to two ounces of fluid. The patient made a good recovery after the operation and his vision, which before was extremely poor, has been benefited.

DR. HARVEY CUSHING, Baltimore: The various means of approach to the hypophysis do not make so much difference as does the matter of dealing with the structure when it is brought into view. The growth often becomes malignant, as is true of long-standing trouble with the thyroid, and it is conceivable that it cannot be entirely removed. In fatal cases it has often been found that only a mere fragment of the growth has been taken away. The operation in the first place has for its object the relief of pressure; the symptoms can be combated by the mere removal of the lower part of the sella turcica and the splitting of the capsule of the gland.

DR. A. B. KANAVEL, Chicago: Concerning the technical procedure in Dr. Halsted's cases, in the first one particularly the view could not have been better. The operation was very quickly done, the anterior wall of the sphenoidal sinus quickly removed, the bulging sella turcica opened, and a tumor protruding into the sinus was removed without difficulty. In the second case, the sella turcica did not bulge into the sinus, it was seen with more difficulty and was arrived at by anatomic deductions. In two cases there was considerable hemorrhage and I would suggest the elevation of the head during the operation. In the majority of cases it will only be necessary within the nose to remove the vomer and the anterior portion of the sphenoid in order to come down on the sella turcica.

DR. DEAN LEWIS, Chicago: The tissue removed from the first case contains no elements which are ordinarily found in the anterior lobe or the pars intermedia, but is composed of stratified epithelium with a papillary arrangement, therefore we must assume that the tumor has probably developed from an epithelial inclusion which has not gone on to complete differentiation. The tissue removed from a second case came from the anterior lobe. In some sections the cell columns are cut parallel, long rows of cells resting between rather thick connective tissue trabeculæ; in other fields the cells have fused and in still other fields the fusion has become so marked that large groups of cells are found, hyperplasia apparently having ended in adenoma formation. It is important to recognize the complex structure of the hypophysis in making the anatomic diagnosis of tumors of this gland, and to remember that the cells of the anterior lobe, when growing rapidly tend to reproduce the structure of a sarcoma.

Benign Bone Cysts, Ostitis Fibrosa, Giant-Cell Sarcoma and Bone Aneurism of the Long Pipe Bones

DR. JOSEPH C. BLOODGOOD, Baltimore: In many lesions technic is ahead of diagnosis. The development of technic is more rapid, because the results of faulty technic are immediate, while the development of diagnosis is more difficult, especially in tumors, because the results are more remote. Treatment of tumors which will assure the patient the greatest possibility of a permanent cure with the least mutilation will be accomplished only when surgeons have a better conception of the local growth of neoplasms. The so-called benign bone cyst may present itself in five forms: First, as a medullary cyst without any definite gross lining; second, as a similar cyst with a definite connective tissue lining which is easily stripped from the bony capsule; third, as a medullary mass of fibrous tissue with a small cyst; fourth, as the same medullary mass of fibrous tissue without any cyst formation; and fifth, as multiple medullary cysts. Among 89 cases of which 20 were personally observed, 69 belong to the variety of true localized bone cyst or ostitis fibrosa. The other 20 cysts have different etiologic factors, for example, cysts in enchondroma, in pure myxoma, in giant-cell sarcoma, in ostitis deformans; cysts due to subperiosteal ossifying hematoma, and callous cysts. At the exploratory incision in benign cysts there is always found a thin shell of bone; the contents of the cyst are usually of a dark-brown color and thin. The giant-cell sarcoma, of which I have studied 19 cases, can also be recognized at the exploratory incision. The medullary cavity is filled with a soft, hemorrhagic tissue resembling granulation tissue mixed with whitish areas which, when removed with the curette, come away in masses of irregular shape. This tumor also has been cured by curetting. It is 8 years since I curetted from the medullary cavity of the upper end of the tibia such a tumor, and this patient has no evidence of recurrence today. Patients have been cured even after repeated curetting; amputation is indicated only when the patient has allowed the tumor to grow to such a size that it has perforated the bone capsule and

infiltrated the soft parts to such an extent that its complete removal would leave a functionless limb. The so-called bone aneurism is a much less frequent tumor and is distinctly malignant. It is a hematoma due to hemorrhage in the most malignant form of medullary spindle, round, or mixed-cell sarcoma, and I believe that in this stage of this tumor metastasis has already taken place, so that no harm could come from mistaking such a tumor for a bone cyst or giant-cell sarcoma. I have seen 3 cases, in one of which the patient was not saved by the highest amputation; in the second case amputation was refused; the third case was first treated as bone cyst, amputation was done later, but the patient died of metastasis.

DISCUSSION

DR. RUDOLPH MATAS, New Orleans: In one case in which, after removal of a giant-cell sarcoma from the humerus, there was a large cavity, I used about an ounce and a half of Mosetig cement, and the patient later developed extreme symptoms of iodoform poisoning, from which he recovered in 10 days, and the arm healed with a perfect contour of the bone. I believe that in Beck's paste we have a most valuable means of filling up cavities, it being superior in my opinion to any other paste.

DR. WILLIAM L. RODMAN, Philadelphia: I recall a patient operated on in 1889 for large giant-cell sarcoma of the lower jaw by free chiseling and curettement but without removal of the maxilla. The patient lived for more than ten years after this operation, and may be alive today.

DR. JOSEPH A. BLAKE, New York: I had a case of sarcoma of the fourth finger. A simple operation in this case proved most satisfactory, and now, three years since operation, there is a normal phalanx.

DR. HARRY M. SHERMAN, San Francisco: In my experience salt solution poured into these cavities a little in excess just before the last stitches are taken is as good as any other material for filling; it is replaced by blood and obviates the necessity of putting in any foreign body.

DR. DUDLEY P. ALLEN, Cleveland: Some years ago, I removed the lower jaw of a patient for giant-cell sarcoma, leaving but a small portion of the substance of the jaw. I used a splint to hold the teeth in place. The patient recovered entirely and is now well.

DR. WILLIAM S. HALSTED, Baltimore: In a case of myxoma of the humerus, although the disease involved the bone from one end to the other, there was no cyst and no fibrous tissue. The bone was excised four years ago except for a strip posteriorly and at the lower end, and the entire cavity carefully swabbed out with phenol. The patient made a good recovery and had a strong humerus, but there were implantation recurrences in the soft parts on two occasions. The patient is now perfectly well.

DR. NATHAN JACOBSON, Syracuse: I recall a patient with giant-cell sarcoma of the jaw in whom I did a partial excision of the upper jaw about 25 years ago. The patient is still living. There was never any recurrence. In my experience in those cases of giant-cell sarcoma in which there is reasonable cleaning out there is seldom a recurrence of the growth.

PROFESSOR A. VON EISELSBERG, Vienna: In such cases as these mentioned, in Vienna we are in the habit, before finishing the operation, of pouring boiling water into the wound in order to destroy all the germs, and have found it a most satisfactory method.

DR. J. BLOODGOOD: Dr. Halsted's case of exostosis with involvement of the humerus brings out the point that pure myxoma is a benign tumor; recurrence after operation may be due not so much to leaving a portion of the tumor growth behind as to infecting the wound in removal of the tumor. In such cases it would be well to use boiling water, pure phenol, or the Paquelin cautery to disinfect the wound.

Diagnosis and Surgical Treatment of Esophageal Diverticula

DR. C. H. MAYO, Rochester, Minn.: Most cases of esophageal diverticula are pharyngo-esophageal. The condition is confined to adults. Dysphagia is the most common symptom; cough and dyspnea are common. Distended sacs are often visible in the neck and can be emptied by pressure. The condition is disclosed by probing and by radiograph of the bismuth-distended sac. H. S. Plummer's method of diagnosis is a combination of the technic of Mixter and Dunham, as used in stricture. The patient swallows a silk thread which passes into the intestine. The Plummer perforated acorn probe passed on the thread gives the depth of the pocket and location of its neck. Gastrostomy for temporary feeding may be necessary. Operation is by lateral oblique incision; blunt dissection; exposure of sac and excision; closure by sutures; rubber tissue drain.

Thoracic Surgery on Human Beings

DR. WILLY MEYER, New York: I have operated on 10 patients with the help of my differential pressure apparatus. In two young patients, 6 and 11 years old respectively, who had suffered for years from bronchiectatic abscess symptoms, and were bad risks, I extirpated a lobe of the lung in each case, but neither recovered. Three times exploratory thoracotomy was done for cancer of the esophagus with recovery. In order to do good surgical work when operating for a malignant stricture of the esophagus I have found it necessary to get the scapula out of the way and, therefore, propose as a preliminary operation the Schede-Friedrich flap operation, by which the entire shoulder girdle is turned up, thus permitting the surgeon to make his incision into the thoracic cavity wherever required; often two incisions are necessary. On March 31, 1910, I proceeded in this way for a cancer of the esophagus in a patient aged 43. It was found that the malignant tumor extended from about 1½ inches above the cardia to the aortic arch. After division of the esophagus and inversion of the lower stump through the sixth intercostal space, the third interspace was opened, and the healthy portion of esophagus reached, outside of the common carotid artery, after proper division of the costal pleura; then the entire diseased portion was shelled out and brought in front of the aortic arch. To my dismay I found in the course of this latter part of the operation that the growth involved the right pneumogastric nerve; it was impossible to push the nerve off; it had to be divided at the lower end of the tumor, and again interfered with in amputating the esophagus above the upper border of the tumor. The proximal end was also inverted by a double purse-string suture, the intention being to do gastrostomy two or three days later. The interference with the pneumogastric nerve had a deleterious effect on the heart action, which up to this time had been splendid. The operation was well completed, but in spite of intravenous infusion given, the patient succumbed shortly afterward. The only hope of operative success in these cases lies in early operation, certainly before the intimately adjacent pneumogastric branches are involved, and the first step of such operation should be to free these nerves. Their involvement will more or less decide the operability or inoperability of the given case. Up to the present time resection of the esophagus has a mortality of 100 per cent.

End-to-End Intestinal Anastomosis by the Invagination Method

DR. C. L. GIBSON, New York: End-to-end intestinal anastomosis by telescoping one segment into the other has been practiced from time immemorial, but at present has no recognized position in surgery. My present technic, I believe, furnishes a method for which there is a demand, particularly in the surgery of the lower end of the colon. It is as follows: The upper cut edge of the gut is seized with two Kocher clamps and introduced by these into the lumen of the lower end and maintained there by an assistant. The extent to which it is feasible to accomplish this invagination will vary. The gut is rotated about a quarter circle so that the non-periosteal covered surfaces do not entirely approximate in the circumference. From eight to twelve interrupted silk sutures are introduced thus: A Lembert suture is begun on the lower segment, the needle issuing just short of the cut edge, on the upper segment the needle is introduced just above the line where the cut edge of the lower segment lies against the intact wall of the upper. When the knot is tied the free cut edge

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has been turned inward, and only the peritoneal surfaces are in contact. A continuous running suture is applied over this area further invaginating the first ones, the Kocher clamps being previously withdrawn.

Postoperative Intestinal Obstruction

DR. GEORGE WOOLSEY, New York: Postoperative intestinal obstruction is either mechanical or paralytic. In early cases diagnosis is not so easy as it is obscured by peritonitis, operative trauma and the sequelæ of anesthesia. Many of the symptoms of obstruction and peritonitis are identical. Rigidity is the important sign of peritonitis and absolute constipation of obstruction. If the latter cannot be relieved, a diagnosis of obstruction should be made. The problem in prophylaxis is to prevent sepsis, operative trauma and adhesions, to which nearly all cases are due; hence operation is indicated in all cases of appendicitis as soon as diagnosis is made. When septic peritonitis is present modern technic (Murphy's) will cure in most cases and prevent paralytic ileus. To prevent atony rough and undue handling of intestines should be avoided. When early distention is marked and increasing, enemata of various kinds may be used with or without physostigmin. Stupes and lavage are also very useful. The prevention of adhesions is largely a matter of careful technic. Operate early, rapidly, yet carefully, and avoid drainage. If drains are necessary, the kind of drains and their position are of great importance. I remove source of infection, avoid displacing bowels, cover denuded peritoneum if possible, encourage early peristalsis and advise frequent change of position after operation. Treatment of actual obstructions is operative. In late obstructions, ample incision should be made over site of obstruction, if it is known, otherwise exploratory operation is indicated. Collapsed and distended coils are guides to obstruction. If gut is not viable I resect and anastomose. In early obstructions, palliation by enemata, physostigmin, lavage, etc., should not be persisted in too long. Most patients are operated on too late.

DISCUSSION

DR. CHARLES H. MAYO, Rochester, Minn.: I want to testify to the invagination method being a good one in the removal of tumors low in the sigmoid, at the upper rectum; in fact, it is about the only way one can get union.

DR. ALBERT J. OCHSNER, Chicago: If immediately on the appearance of nausea or gaseous distention gastric lavage be instituted, there will be fewer instances of intestinal obstruction following shortly after operation.

DR. E. WYLLYS ANDREWS, Chicago: End-to-end anastomosis implies for success that we get the lumen at once, and this is not true with the McGraw ligature; but if we can devise a method by which all the advantages of this ligature can be strengthened by obtaining the open lumen immediately we will have an ideal method.

DR. ALEXANDER H. FERGUSON, Chicago: In regard to operative obstruction and the prevention of adhesions following operations, I would say that for four years I have used subgallate of bismuth, smearing it over all raw surfaces, with most complete satisfaction.

Abnormal Position of the Duodenum

DR. G. E. ARMSTRONG, Montreal: The duodenum is singularly constant in its relations, course and length; any exceptions are exceedingly rare and worthy of note. In the anomaly reported, the duodenum ran to the right and then turned downward external to the hepatic flexure, ascending colon and cecum, and, merging into the jejunum, passed from without inward below the cecum into the small intestine area. The duodenum was completely surrounded by peritoneum. It had a long mesentery throughout and could easily be held two or three inches in front of the abdominal wall. The head of the pancreas, closely applied to the duodenum, was visible and palpable between the layers of the duodenal mesentery, and readily followed the duodenum when the latter was brought outside the body. There was no ligament of Treitz and no fossa duodeno-jejunalis. The condition is clearly one of arrested development. The cecum in this case did not mount upward to the lower hypochondrium and did not pass in front of the loop of the duodenum. The cecum did not descend to its usual final resting place in the right iliac fossa. It was high, completely surrounded by peritoneum, very movable, and could be brought out through the epigastric incision and held eight inches in front of the body.

DISCUSSION

DR. MAURICE H. RICHARDSON, Boston: I have observed a case in which the appendix, the gall-bladder, the liver and the ileocecal valve were on the left side, the spleen on the right side, and the heart on the right side.

DR. EMMET RIXFORD, San Francisco: I would put on record a case of failure of rotation of the primary gut. The explanation of this condition is probably to be explained on the basis of adhesions of the cecum to the parietal peritoneum the result of a fetal peritonitis.

DR. LEONARD FREEMAN, Denver: I had a case in which acute dilatation of the stomach followed an unimportant pelvic operation, and which at autopsy showed the duodenum passing directly beneath the liver.

(To be continued)

AMERICAN ORTHOPEDIC ASSOCIATION

Annual Meeting, held in Washington, D. C., May 3-5, 1910

(Concluded from page 1596, Vol. LIV)

Officers Elected

The following officers were elected: President, Dr. Albert H. Freiberg, Cincinnati; vice-presidents, Drs. A. R. Shands, Washington and Robert B. Osgood, Boston; treasurer, Dr. G. G. Davis, Philadelphia; secretary, Dr. Ralph R. Fitch, Rochester, N. Y.

SYMPOSIUM ON SCOLIOSIS

Treatment of Structural Scoliosis

DR. WALTER TRUSLOW, Brooklyn: In my opinion the embarrassing and health-depleting conditions of the severely scoliotic patient should be vigorously attacked. I do not consider either prolonged rest or vigorous gymnastic treatment adequate to overcome structural changes. There is considerable room for improvement in methods of treating these cases, and an analysis of the deformity into its component elements, with regard to the degree of each, would lead to a better understanding of the cases in hand, and would point out the method of correction to be used. Frequently changed plaster-of-Paris jackets with large windows are employed because of their cheapness and the adaptability of the material.

Apparatus for the Treatment of Scoliosis During Sleep

PROF. FRITZ LANGE exhibited a brace that he had devised for this purpose, thus preventing patients from losing at night all the good that they have acquired in the day time.

DISCUSSION

DR. R. H. SAYRE, New York: Patients who are badly deformed cannot be cured, but a great deal can be done to ameliorate the condition of such patients. In a good many cases we do not exert our force as we should. We do not exert a rotating force to the vertebræ. The result of applying the pad in Professor Lange's apparatus and in Dr. Truslow's method of treatment is to cause a lateral, instead of a rotating pressure. Dr. Lange is right in saying that to correct the spine for six hours and leave it to get crooked sixteen hours during the night is useless. If we stop the brace at the axilla we leave the upper part of the body very much unprotected. I believe that not enough stress has been laid on preventing cases from becoming scoliotic from anterior poliomyelitis in which the thorax is involved, by means of traction on the head for a long time.

DR. A. H. FREIBURG, Cincinnati, showed an apparatus for measuring scoliosis. It combines in one instrument the work formerly performed by two imported instruments, and is cheaper for Americans to obtain.

DR. TRUSLOW, Brooklyn: I was very much pleased to hear that Dr. Lange appreciates the necessity for the fixation treatment in scoliosis. It seems as if the tendency were certainly toward that method of treatment.

SYMPOSIUM ON POLIOMYELITIS

The Relation of Poliomyelitis to the Community with Reference to Etiology and Prevention

DR. ROBERT W. LOVETT, Boston, read an exhaustive paper on this subject, illustrated with charts containing statistics gathered from the Massachusetts epidemic that occurred last year. The following facts were mentioned:

Outbreaks of infantile paralysis have greatly increased in various parts of the world within the last five years, in a measure not to be explained in any way by the increased interest in the disease. It is apparently more prevalent in warm than in cold countries. From the northern part of the United States more cases have been reported than from other parts of the world. We no not know by what channel the disease enters the body, nor how to prevent its spread. Careful investigations have been made, including a house to house canvass in infected districts, made by competent medical men, giving their whole time to the investigation.

The Clinical Aspects of Poliomyelitis: Types; Communicability; Mortality

DR. L. EMMET HOLT, New York: The disease varies greatly in its communicability at different times, and these differences cannot yet be reconciled. It often demands strict quarantine. Healthy persons may be carriers of infection, which may occur at a considerable time after contact with active cases. There is no evidence of the existence of any other medium of contagion than contact with persons suffering with the disease or those exposed to it. A new name for the disease should be sought, and I suggest the term epidemic myelitis or epidemic myelo-encephalitis.

Experimental Epidemic Poliomyelitis and Its Relation to Human Beings

DR. SIMON FLEXNER, New York, presented a report on the experimental study of poliomyelitis in monkeys, giving facts relating to the spontaneous disease in man, covering the work recently reported in THE JOURNAL.

Paralysis of the Neck and Diaphragm in Poliomyelitis

DR. IRVING M. SNOW, Buffalo: Neck paralysis in combination with loss of power in the extremities is not unusual in poliomyelitis, but isolated neck paralysis is extremely rare. Paralysis of the diaphragm is scarcely mentioned in treatises on poliomyelitis, except in connection with the fatal type of Landry's paralysis. From my study of the literature on the subject, the following conclusions may be drawn: 1. Poliomyelitis affecting the origins of the phrenic and spinal accessory nerves is rare, but in the two reported cases recovery occurred. 2. Paralysis of the neck muscles occurs occasionally in epidemic poliomyelitis and severe Landry's paralysis. The prognosis is favorable as to restoration of function; some improvement always takes place. 3. Paralysis of the diaphragm is exceptionally seen in poliomyelitis; and although this is dangerous, recovery is possible.

Pathology of Poliomyelitis

DR. ISRAEL STRAUSS, New York: The rapid disappearance of the extensive paralysis often present, even in sporadic cases of poliomyelitis, is probably due to a subsidence of the inflammatory edema that has interfered with the conductivity of the nerve-fibers, a similar condition being found in the collateral edema causing paraplegia in Pott's disease. Many of the cells at any particular level of the cord are either not at all or very slightly affected and probably undergo a rapid restoration of function. Sporadic cases rarely have symptoms referable to the meninges, probably because the virus is not virulent enough to cause the final infiltration of the fatal cases. The extent of the paralysis gives no idea of the extent of the lesion. The bulbar cases may have cord involvement, and yet no symptoms of it. In every case in which the cord is affected, there are some inflammatory changes in the bulb, even though no symptoms are present, as even in those cases in which death is due to respiratory failure an examination of the bulb shows an increasingly intense inflammation extending up into the basal ganglia, and yet causing no other symptoms than paralysis of the motor nucleus of the nasal and glosso-pharyngeal nerves. In the vast majority of cases the physician is handicapped by his inability to recognize the disease.

The Treatment of Poliomyelitis

PROF. FRITZ LANGE, Munich: In the early stage of the disease one should try to prevent the extension of the seat of the infection into the spinal column, and holding the affected organ still is a most important requirement for speedy recovery. After the acute stage has passed a second task devolves on the orthopedist, to assist the restoration of the paralyzed muscles and prevent the occurrence of contractions. The nourishment of the affected muscles by the blood can be favored by the application of stimulation; but I warn physicians against the use of rough, hard massage, or of hard apparatus. Most patients are content with the relief afforded by the use of apparatus, and will not submit to operation; but I have seen undoubted success obtained by operative treatment. Patients are often troubled by stiffness of the foot in walking over irregular ground, and I therefore sought an operation that would retain the movements of the foot to 90 degrees, and only restrain the dangerous sinking of the foot beyond this point. In performing this operation artificial ligaments of silk were used and I think the results will be good. Transplantation of the tendon takes the place of arthrodesis.

The chief advantages of the operation are that, with careful after-treatment, the patients are able to walk without apparatus or danger of relapse, and with normal function of the transplanted muscle. The profession will soon learn to distinguish better between the indications for arthrodesis and those for transplantation of tendons. The latter operation, having already brought benefit to countless patients, may be considered among the greatest advances in orthopedic surgery.

DISCUSSION

DR. BERNARD SACHS, New York: Although the pathological conditions show that there is much more than a mere anterior poliomyelitis in the disease called by this name, I think it is well to retain that designation, which is so well known, as the lesion is largely in the gray matter. In the treatment of these cases of infantile spinal paralysis I believe the time given to massage and electricity to be practically wasted. I will not say that this method of treatment does harm, but in my experience I cannot put my finger on any definite good done by it. I believe that more good will be done by the early institution of orthopedic measures. I trust that the bloodless and the bloody surgery will be applied to these cases; and the earlier the period, the better will be the results. The so-called atypical forms of poliomyelitis are so rare compared with the typical that we should not allow our conception of the disease to be disturbed by the occasional occurrence of atypical cases.

DR. H. WINNETT ORR, Lincoln, Neb.: I have been endeavoring to collect as much information as possible regarding the epidemic that recently occurred in Nebraska. There were over six hundred cases. I have records of 619, concerning two-thirds of which I have been able to obtain detailed information.

Muscle-Group Isolation and Nerve-Anastomosis in the Treatment of Paralyses of the Extremities

DR. NATHANIEL ALLISON and DR. SIDNEY I. SCHWAB, St. Louis, considered briefly the position now occupied in the treatment of the paralyses of the extremities by peripheral nerve surgery as compared with that of muscle and tendon transference, and laid stress on the importance of tabulating cases of paralyses of the extremities in terms of nerves rather than in terms of muscles or deformities. Cases of athetosis and spasticity were treated by muscle-group isolation only; flaccid paralyses, by muscle-group isolation and nerve-anasto-

mosis and cases with complicated tic movements, by induced paralysis. Illustrative cases of each of these groups were cited.

DISCUSSION

DR. SIDNEY I. SCHWAB, St. Louis: The alcohol injections in spastic cases are not curative. All that we attempted was temporarily to throw out of action the antagonistic muscle. The opposing group is meanwhile exercised with massage; so that by the time the original nerve regenerates, the muscular force has been somewhat transferred to the opponent group. A great advantage, also, is that the patient can be up out of bed within a few days. There is no necessity for the wearing of a plaster cast. In the second group of cases the operation of throwing out of action the antagonistic pull was very effective. By the time the nerve regenerates, the antagonistic muscle has not regained its original force. The third class of cases, tics, can be attacked in a much better way than ever before by surgical treatment. In one case, while three nerves were alcoholized and thrown out of function, and there was complete anesthesia to touch and pain, no trophic disturbance appeared in any part of the arm.

DR. B. E. MCKENZIE, Toronto: Will Dr. Allison tell us some particulars regarding the technic and the strength of the alcohol used in the injections?

DR. G. G. DAVIS, Philadelphia: To my mind, the alcohol injection of nerves is similar to the division of nerves. After the nerves unite they resume their functions; and after the effects of the alcohol wear off they also resume their functions. If they do not resume their functions absolutely after alcoholization, there is an advance over division; but I do not think that we have had sufficient results shown yet to demonstrate that regeneration of the nerve does not take place entirely, or to what extent it fails to return. In regard to treatment by means of nerve anastomosis, I think that we must wait longer before we can determine the value of that method of treatment.

DR. VIRGIL P. GIBNEY, New York: If these gentlemen can, by attacking the nerves, destroy them for a number of months, they can develop the opposing muscles during that time; and this cannot be done with the use of plaster of Paris. If the children are going around, their education can be carried on; so it seems a wonderful advance in the therapeutics of spastic paralysis.

DR. WALTER G. STERN, Cleveland, O.: Whatever operation you do for athetosis, the movements return after awhile. Amputate the arm below the shoulder and the shoulder will move.

DR. N. ALLISON, St. Louis: We varied the strength of the alcohol to a certain extent. It must be 50 per cent. to have any effect. Some patients had more lasting paralyses than others. I think that the percentage of alcohol may have something to do with this. I have used straight alcohol in some cases.

VACCINE THERAPY

The Indications for and the Uses of Vaccine Therapy in Orthopedic Diseases

DR. CHARLES F. PAINTER, Boston: There is no well-established theoretical ground for the belief that, in gonorrheal and tuberculous joint infections vaccines can play a curative rôle. Very little progress has been made as regards either the diagnosis or treatment of chronic non-tuberculous infections. The complement-binding reaction in the diagnosis of syphilitic bone and joint infections has stood the test of practical experience very well. There is reason for thinking that the future treatment of these conditions will be much facilitated by vaccine and serum therapy, although the results of this are not yet even comparable to those obtained from the use of Marmorek's serum in the treatment of tuberculous arthritis. The efforts of the members of the association should be directed to the perfection of methods of putting into practice a test for which there seems to be so much theoretical and experimental justification; but statistics, however favorable, are undesirable, unless there is indisputable ground for the claim that the results recorded can be obtained under no other form of treatment.

Investigations as to the Value of Tuberculin in the Treatment of Tuberculous Joint Disease at the Home for Destitute Crippled Children at Chicago

DR. JOHN RIDLON, Chicago, gave the details of these investigations, which were first by Wright's opsonic method and later by the so-called clinical method. His conclusions were that tuberculin administered by the clinical method in harmless doses was useless; and that in larger doses it was both dangerous and harmful.

DISCUSSION

DR. V. P. GIBNEY, New York: May I present an optimistic report? During the past winter my staff used streptococcus and staphylococcus serum in cases of tuberculous sinus, but have not used tuberculin. In half a dozen of these cases the sinus has been permanently closed. I quite agree with Dr. Painter that these patients do improve at first under almost any form of treatment.

DR. J. K. YOUNG, Philadelphia: We have had very good results in Philadelphia in treating tuberculous sinuses by means of autogenous serums. It is important to use the autogenous method and the opsonic index, and not to employ the clinical method.

DR. A. H. FREIBERG, Cincinnati: Tuberculin is not the toxin of the tubercle bacillus, but a means of calling forth in the body the production of an increased amount of this toxin. In order to cure tuberculosis by the vaccine method we should have to use the toxin of the tubercle bacillus. At the same time tuberculin is entitled to a fair test. Evidence is pretty conclusive that in joint tuberculosis it is the bovine form of the tubercle bacillus that is present. If that is true we should use bovine and not human tuberculin in these cases. I have had excellent results from the use of Marmorek's serum, the only difficulty being that it is hard to get and very expensive.

DR. CLARENCE L. STARR, Toronto: In Toronto we have dropped the use of tuberculin in joint or sinus cases, because we obtained no results from its use. The opsonic index is absolutely useless, as it varies materially in children as the result of autointoxication. In mixed infections we have adopted the use of staphylococcus, and occasionally streptococcus serum, with sufficiently good results to warrant us in continuing their use. We have equally good success, whether we use stock vaccine or vaccine prepared from the patient himself.

DR. S. J. HUNKIN, San Francisco: It seems to me that the results obtained by the use of vaccines in the treatment of bone tuberculosis depend purely on the temperament of the man employing them.

DR. CHARLES F. PAINTER, Boston: I purposely said nothing about mixed infections, but I believe that the only satisfactory results have been obtained in that sort of cases.

Further Observations on the Pathology of Joint Tuberculosis, and Practical Deductions Therefrom

DR. LEONARD W. ELY, New York: Only two elements of joints are subject to tuberculosis: the synovial membrane and the red marrow of the bone as shown in the specimens of tuberculous joints here exhibited. In the sixty cases from which these specimens were taken, there were thirty-five errors in diagnosis. Tuberculosis might exist in one spot in a joint and not in another, repair and invasion going on simultaneously in different parts of the same joint. The way to cure the process is to deprive the joint temporarily of motion, but this is seldom successful in adults. In adults, therefore, it is necessary to deprive the joint of motion permanently. The presence of bone marrow and of synovia depends on their function; and when function is stopped they disappear. The disease, having nothing on which to feed, disappears also.

DISCUSSION

DR. J. K. YOUNG, Philadelphia: The occurrence of syphilis preceding tuberculosis in the same individual is interesting, because I have seen tuberculosis in individuals who previously suffered from syphilis.

DR. M. M. SHAFFER, New York: I should like to know whether the initial lesion is in the synovial membrane or the bone marrow.

DR. FRED H. ALBEE, New York: It has been noted in my observations that it is not necessary to remove all the infected tissue from the knee joint in order to obtain a good result.

DR. WALLACE BLANCHARD, Chicago: I have been surprised at the number of cases of old resected knee joint that have come to me with a history of having been healed for two or three years, and afterwards developing sinuses. I question very much whether excision of the knee joint modifies the progress of the disease except temporarily; and it more than quadruples the deformity.

DR. G. G. DAVIS, Philadelphia: Would Dr. Ely, as soon as practicable after he has made a diagnosis of a distinct case of synovial tuberculosis in an adult, proceed to resection—that is to say, such resection as he does, which, as I understand it, is nothing more than an arthrodesis in which he takes off the cartilage in order to get immobility?

DR. R. R. FITCH, Rochester, N. Y.: I think that Dr. Ely would accomplish the doing away with function more quickly, if he would put on a bone plate, or sink screws and apply strong wires, for the purpose of obtaining bony apposition.

DR. L. W. ELY, New York: Dr. Young did not understand me aright. At first I thought it a case of syphilis, and then one of osteomyelitis; it turned out to be tuberculosis. Regarding the origin of the disease, I think that in adults it is equally common for it to start in the synovia and in the bone. If it starts in one, it may never involve the other; but the general rule is that after it starts in one it involves the other before long. I cannot diagnose the synovial from the bony type, but I can make a fairly good guess at it. I think that the synovial disease is characterized by less atrophy, milder symptoms, less tendency to deformity, and a slower course. When I diagnose synovial tuberculosis I tell the patient that I will recommend that he have his joint put up in plaster for six months, in case of a mistake in the diagnosis; and that at the end of that time I shall probably have to resect the joint. Bone plates are not necessary. Usually the two ends of the joint lock tightly together, and there is no tendency to mobility.

Osteochondritis Desiccans

DRS. ALBERT H. FREIBERG and PAUL G. WOOLLEY, Cincinnati: Koenig has maintained the existence of osteochondritis as a distinct entity and as the cause of joint mice, excepting those produced by arthritis deformans. [They reported a case in which operation and pathological investigation furnished corroboration of Koenig's views, but in which certain new aspects were added.] The great interest in our case lies in the fact that three varieties of joint changes were found going on in one joint at the same time, apparently depending in their reciprocal relation on the vascular changes. We do not think that the types of chronic deforming joint affections can be looked on as separate and distinct diseases. The future will disclose the etiological factors that determine the prevalence of this or that type in a give case.

DISCUSSION

DR. C. F. PAINTER, Boston: It does not seem to me that these *x*-rays are suggestive of the appearances in the ordinary cases of chronic hypertrophic osteoarthritis. The explanation may be that these appearances were the result of the vascular changes present at the same time.

DR. WOOLLEY, Cincinnati: I do not think that we have proved anything by the small amount of work we have done, but I do think we have some basis for supporting the work of Wollenberg. It was interesting that we could get these various changes in one case—changes that appeared like those described by other men in various forms of atrophic and hypertrophic joint disease.

DR. A. H. FREIBERG, Cincinnati: I did not mean to convey the impression that these appearances were like those we see usually in radiograms of hypertrophic arthritis. The interest lay in the fact that we had a case in which free bodies had formed, and were apparently still forming; and in which a second kind of free bodies had apparently formed on other occasions. When we came to examine the changed synovial membrane of these joints, we found changes in accord with the changes described by Wollenberg in cases that were typical of hypertrophic arthritis; and it seemed to us that these two things must be brought into correlation, and that some explanation of this character is to be found for these cases in the *osteochondritis desiccans* of Koenig.

Syphilis of the Bones and Its Bearing on Hypertrophy and Atrophy

DR. S. L. MCCURDY, Pittsburg: Syphilis is a factor in the majority of cases of bone disease of all varieties. Hypertrophies and atrophies should have a reclassification, with the causative factor as the basis, rather than the pathological end. In tuberculous disease of the bones the bones are always atrophied; while in syphilitic bone disease they are always hypertrophied and also eburnated, with exostoses. There is always a spindle enlargement, and not only a hyperostosis, but an endostosis. Charcot's disease is in many instances syphilitic, because it melts away under constitutional treatment. Saber-tibia I also consider to be always syphilitic. The objects of operation in syphilitic bone disease are to liberate pus, to relieve pain, and to remove sequestra. One should excise but never destroy tissue. I approve of the use of iodid of potash, but not of mercurial inunctions, and mechanical treatment should be employed just as in ordinary tuberculous bone disease.

DISCUSSION

DR. LEONARD W. ELY, New York: While I believe that syphilitic bone disease in cases diagnosed as tuberculosis has existed, I think it is comparatively rare. The statement that the lesions of tuberculosis are always atrophic is also an error, nor is the therapeutic test decisive.

DR. S. L. MCCURDY, Pittsburg: I did not expect very many to agree with me. I think that these statistics that I have been collecting for a number of years are sufficient ground for me to continue my plan of treatment, because I have usually cut short the course of the disease by employing iodid of potash.

Coxa Vara

DR. WALLACE BLANCHARD, Chicago: The two cases of sadly deforming coxa vara here reported may help to clear up some questions of differential diagnosis. I object to the statement that coxa vara is due to tuberculosis, as I have found rachitic coxa vara greatly in excess of all other types. This might, however, be due to my special line of work, the correction of knock-knees. Treatment of the deformity during its progress is very unsatisfactory; but when the disease has run its course, osteotomy for the elevation of the head of the femur and for the relief of the adduction deformity gives good results.

DISCUSSION

DR. G. G. DAVIS, Philadelphia: I would suggest that the first case was analogous to cases of subluxation of the wrist, which occur in adolescents and young adults, and in which the wrist is distorted, especially the lower end of the radius. This disease is probably due to rickets.

Juxta-Epiphyseal Fractures of Hip and Shoulder

DR. FRED H. ALBEE, New York discussed the diagnosis and the frequency of occurrence of juxta-epiphyseal fracture of the upper end of the humerus and femur, and said that faulty diagnoses are frequent. He took into consideration the different elements displacing the fragments, and laid stress on the importance of the use of position in fixing the long, or controllable, fragment in alignment with the short, or uncontrollable, fragment. Several illustrative cases were cited.

DISCUSSION

DR. H. WINNETT ORR, Lincoln, Neb.: The tracing of one of Dr. Albee's cases might have been taken for the plate of one

of my patients. I immediately placed this boy in the sort of plaster dressing described by Dr. Albee, but took the liberty of extending it a short distance farther, so as to include the hand.

DR. FRANK R. PECKHAM, Providence, R. I.: It should be recognized by the profession that these fractures should be treated by orthopedists rather than by general surgeons. Regarding fractured neck of the femur, if you put every such fracture in extreme abduction, you will not always have the fragments in perfect apposition. The correct angle should be determined by the *x*-ray. Dr. Albee has demonstrated the application of the same principle to fractures of the upper extremity. When these fractures are treated in bed you can begin passive motion and massage early. Then, when you have union, you have the functional result also.

DR. S. J. HUNKIN, San Francisco: My experience has shown that not in every case can the fragments be held in apposition in a position of extreme abduction; and in two or three instances I have found it absolutely impossible to hold them in apposition, regardless of any position that was taken by the leg. It is also sometimes impossible to tell whether the fragments are in apposition or not, even by means of the *x*-ray. I think that practically all fractures of the femur should be cut down on. The fragments should then be found to be replaced by the finger and eye, and fastened with some metallic suture. The splint used at first should be one that will allow you to see the part.

DR. ALBEE, New York: I want to emphasize the difficulty of holding the epiphyseal fragments of the humerus. An epiphyseal fracture is held much more firmly by this method than is one of the neck, although it will usually hold the latter.

SYMPOSIUM ON THE FOOT

Relaxation of the Annular Ligament of the Ankle-Joint as a Cause for Weak Foot and Flat-Foot

DR. J. TORRANCE RUGH, Philadelphia: I have for some years been inclined to believe that the cause of weak feet and flat-feet lies in the lower portion of the annular ligament, which performs three distinct functions in the economy of the foot. It binds down the tendons of the tibialis anticus and the extensor proprius hallucis, and keeps them tense; it acts as a sling for the support of the dorsalis; and it takes up the slack in the plantar fascia, when the tibialis anticus and the dorsal flexor of the great toe contract. It, therefore, not only has important functions of its own, but it also assists the neighboring structures in the performance of their functions; and if they become relaxed, the strain on this portion of the ligament increases, and it may give way. For this reason, it should be considered in cases of weak or flat foot.

Osteophytes of the Os Calcis

DR. J. D. GRIFFITH, Kansas City, Mo.: Bacteria are not necessary to the production of a deposit of bone by the periosteum, but constant irritation and pressure may easily inaugurate a *locus minoris resistentiæ* and cause osteoblastic deposition, especially when perverted metabolism is added. This thickened condition or deposition of extra bone is frequently the cause of painful feet. The horseshoe incision is the only one that is entirely satisfactory and devoid of the possibility of causing future trouble.

An Operation for the Relief of Anterior Metatarsalgia, Including Morton's Disease

DR. A. MACKENZIE FORBES, Montreal: This condition is primarily due to abnormal laxity of the ligaments and the transverse metatarsus muscle, allowing the falling of one or more metatarsal heads. The pressure of the displaced bone on the soft tissues beneath it is the cause of the pain, which may later become exaggerated by the formation of a callus on the weight-bearing skin. Secondarily, a mild form of arthritis sometimes supervenes. As the second, third and fourth metatarso-phalangeal joints are supplied by the external branches of the anterior tibial, which motor nerve supplies the extensor longus digitorum, spasm of this muscle often results, causing hyperextension of the phalanges of the affected joints. When chronic, this hyperextensison is often followed by a dorsal subluxation of the phalanx; and this tends to depress the heads of the affected metatarsals against the adjacent soft tissues. The only difficulties in the operation proposed for the relief of this condition are those connected with the attachment of the extensor tendon to the depressed heads and the guarding against a low form of infection, which may destroy the attachment. The first difficulty is overcome by raising the head by direct pressure from below.

Problems in the Treatment of Club-Foot

DR. W. G. STERN, Cleveland, Ohio: When not due to faulty technic in applying the plaster cast, a decubitus occurring on the dorsum of the foot is due to cutting off the arterial supply of the arch afflicted; and the cyanosis of the toes is due to a damming back of the venous return. Both of these untoward occurrences are caused by the compression of the soft tissues of the dorsum from over-correction. The relief of this condition may be brought about by reducing the over-correction and fixing the foot in a less extreme position. The amount of correction practicable at any one sitting is primarily dependent on the circulation, and is often considerably less than the maximum. For the best results in club-foot, a maximum over-correction must be secured; but this should not be done at one sitting. The circulation in this, as in other forcible operations, should control the amount of correction obtainable at any one sitting; and if the latter is not sufficient for a permanent cure, the correction must be repeated at suitable intervals until the maximum over-correction can be safely maintained.

Flat-Foot. Mid-Tarsal Valgus

DR. E. H. BRADFORD, Boston: The foot changes shape under different static conditions, and there is difficulty in checking the inward sag and twist. After operation in order to regain suppleness and strength, daily exercise is a necessity. It is important to correct joint stiffening and restore muscular strength. Supports are beneficial but not curative.

DISCUSSION

DR. H. P. H. GALLOWAY, Winnipeg: I have used Dr. Griffith's incision with more satisfaction than the simple linear incision. I never employ the latter on the center of the heel. The operation described by Dr. Forbes is an exceedingly ingenious application of an operation employed by all of us for other conditions. I have frequently transplanted the extensor tendons of the toes to overcome the closed condition of the toes met with in static paralysis, and to secure more power of dorsal flexion by transplanting these tendons from a very movable to a fixed point. I have devised a simple instrument that automatically centers the drill in making holes in bones of very small diameter. There is then no possibility of the drill's slipping. I have always succeeded in relieving metatarsalgia by mechanical means. If I find a case that I cannot relieve in this way, I will adopt this operation.

DR. G. G. DAVIS, Philadelphia: I should like to call attention to resection of the head of the metatarsal bone for metatarsalgia. Morton did this, and not infrequently found that it destroyed the stability of the toe. Later, he often performed amputation of the toe. Therefore, it would be interesting to know whether in Dr. Forbe's procedure the tendon of the extensor brevis is sufficient to maintain the toe in a straight line.

DR. S. L. MCCURDY, Pittsburg: I want to speak of a method that I have used when the tendons are taken from the foot. I take from the toes tendons long enough to wrap entirely around the foot in cases of closed toe. They are brought back and sutured to themselves. This gives a perfectly stable anchorage.

DR. YOUNG: I have had occasion to perform the Morton operation several times, and have always had to remove the toe. The statement has been made that it is not necessary to operate on these cases. As a man's experience increases, he will find that some of these cases will require operation; and that of Morton is perfectly satisfactory.

Book Notices

PREPARATORY AND AFTER TREATMENT IN OPERATIVE CASES. By Herman A. Haubold, M.D., Clinical Professor in Surgery and Demonstrator of Operative Surgery, New York University and Bellevue Hospital Medical College, New York. Cloth. Price, $6. Pp. 650, with 429 illustrations. New York: D. Appleton & Co., 1910.

The author intends his book to furnish a source "from which the practitioner can draw information with regard to the handling of a patient to be operated on from the time the decision to operate is reached up to the making of the incision," taking up the case again from the time the operative technic is ended until recovery is complete.

The unjust relations which often obtain between the surgeon and the man who sends him the case are deplored, conditions which have resulted in loss of the family to the practitioner, or to a division of fees. To the end that these conditions may be improved, the author very commendably would educate the general practitioner in surgical technic, make him a closer ally of the surgeon and keep him in closer touch with his patient. There will, however, be some hesitancy on the part of surgeons to assume the responsibility for some one who has not the knowledge nor the experience to manage properly the preparation and after-care.

Where the operating is done in the country or in private homes, it is conceivable that a book of this kind can be invaluable to both practitioner and surgeon. For this purpose, however, the author covers too wide a field, going into operative technic and other details which are beyond the subject, according to his introductory declaration. Why should there be thirty pages descriptive of a hospital operating-room? Why should so much space be devoted to the suturing of wounds? As for catgut, the busy practitioner would scarcely be in a position to prepare catgut of sufficient reliability to recommend itself to the average surgeon. The author might have sacrificed some of the detail, and emphasized the great fundamental principles involved in surgery, preparatory and postoperative. He gives in detail the preparation of the patient, the instruments, dressing and suture material. Then follow chapters on the suturing, drainage and dressing of operative wounds. The methods are well illustrated and follow the newest technic. The treatment of postoperative vomiting, thirst and pain and the important question of feeding are admirably handled.

A discussion follows of operations in different regions, namely, head, neck, thorax, abdomen and extremities; also the pelvic and genitourinary organs. There is a good chapter on artificial limbs.

This book is more than a guide for the general practitioner; it contains much valuable information for the surgical assistant, and even for the surgeon himself. The text is carefully written and illustrated profusely with many original photographs. The mechanical side has been very well taken care of by the publishers.

APPLETON'S NEW PRACTICAL CYCLOPEDIA. Edited by Marcus Benjamin, Ph.D., Editor of the United States National Museum, Washington, D. C., assisted by Arthur E. Bostwick, Librarian of the St. Louis Public Library; Gerald Van Casteel, Chief of Editorial Staff; George J. Hager, Expert Compiler and Statistician, with an Introduction by Elmer E. Brown, Ph.D., United States Commissioner of Education. In Six Volumes. Cloth. Price, $18 the set. Pp. 3000 (about). New York: D. Appleton & Co., 1910.

In the introduction Commissioner Brown says: "It is one province of works of reference to supply, to a reasonable degree, the definite and elementary information which will enable any ordinary reader to make good his individual lack of knowledge on any subject of ordinary discussion." An examination of this work in six volumes, as compared with the "Universal Cyclopedia" of the same publishers in twelve volumes, shows that this decrease in volume has been secured by leaving out many subjects contained in the longer work and by condensation and abbreviations of others. The publishers say that an attempt has been made to give the descriptions of technical things in language that may be easily understood by any one. The work is, of course, intended for those who cannot afford to own and have not access to the larger and more exhaustive works of general reference, and should be judged on that basis. While condensation has been carried to a degree which will strike one familiar with the larger encyclopedias as excessive, this work will be useful to those who need more frequently to find some particular item of information than to find exhaustive information on some broad subject. Its plan of arrangement makes it easy of consultation. The index with analytical cross-references, and the group, or synthetical, index, are good features.

The book is mechanically well executed. The illustrations are for the most part identical with those used since cyclopedias were first made, but in addition there are some halftone photographic reproductions and a number of admirable colored plates.

REMEDIAL GYMNASTICS FOR HEART AFFECTIONS USED AT BAD-NAUHEIM. By Dr. Med. J. Hofmann and Dr. Med. L. Pohlman. Translated by John G. Garson, M.D., Edinburgh, Physician to Sanatoria and Bad-Nauheim, Eversley, Hants. Cloth. Price, 5 shillings. Pp. 128, with 42 illustrations. London: Swan Sonnenschein & Co., 1909.

The authors briefly refer to other systems of gymnastics used in heart diseases, but do not discuss them. The second chapter, which is one of the most important in the book, is a reprint of an article by Professor von Romberg, and tersely but fully describes the indications for and against the use of gymnastics in these affections. The succeeding chapters relate to methods of estimating the effect of gymnastics on the heart. The authors urge that no one method be relied on fully, for no single one will afford the needed information in every case. The effect on the pulse and the inferences to be adduced are first considered; then the effect of gymnastics on blood-pressure and on the size and shape of the heart, as shown by auscultation, percussion and *x*-ray, are discussed. Sommer's analysis of movements is highly commended as a means of determining fatigue of the heart muscle. This is a mechanical contrivance which registers on a moving paper tremors in all directions of a leg held horizontally without support. The various ways in which gymnastics can be used and their order are next considered. Nearly one half of the volume is devoted to illustrations and brief descriptions of the movements which constitute the Nauheim exercises.

This book is a commendable exposition of the Schott exercises used at Nauheim.

STUDIES IN IMMUNITY. By Professor Paul Ehrlich, Privy Councilor and Director of the Royal Institute for Experimental Therapy, Frankfurt, Germany, and his Collaborators. Collected and Translated by Charles Bolduan, M.D., Bacteriologist, Research Laboratory, Department of Health, City of New York. Second Edition. Cloth. Price, $6. Pp. 712. New York: John Wiley & Sons, 1910.

It reflects no little credit on the condition of medical science in America that so technical a work as this translation of the collected papers of Ehrlich and his collaborators has exhausted the first edition in less than four years. The translator has taken advantage of the opportunity, in this second edition, to add eight of the more recent papers, on the following topics: "The Multiplicity of Antibodies Occurring in Normal Serum," "The Binding of Hemolytic Amboceptors," "The Joint Action of Normal and Immune Amboceptors in Hemolysis," "The Power of Normal Serum to Deflect Complement," "The Joint Action of Several Amboceptors in Hemolysis," "Studies in Amboceptors," "Dissociation Phenomena in the Toxin-Antitoxin Combination," and "The Partial Function of Cells," the last being Ehrlich's Nobel Prize lecture. The absence of an index constituted a defect of the first edition which has been remedied in the second, and this will add much to the usefulness of the work. American medicine is much indebted to Dr. Bolduan for his service in rendering these masterpieces accessible to a larger audience than they could reach in their original vehicle.

TWENTY-EIGHTH ANNUAL REPORT OF THE STATE DEPARTMENT OF HEALTH OF NEW YORK. For the Year Ending Dec. 31, 1907. Volume II, Report of the Sanitary Engineering Division. Cloth. Pp. 869, with illustrations. 1908.

The second volume of the twenty-eighth annual report of the New York State Board of Health contains the report of the chief engineer, Theodore Horton, on sewerage and sewage disposal of the towns of the state, giving diagrams, illustrations and explanations of a large number of plants for sewage disposal. He shows that a great many towns of the state are adopting modern methods of treatment by settling-tanks, sep-

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tic tanks and filter or contact beds. The reports on the preservation of public water-supplies, the investigation of stream pollution and watersheds and the sanitary inspections of summer resorts, with the report to Governor Hughes of investigations ordered by him on the pollution of the upper Hudson and other streams, all go to show that New York has good laws and is well in advance in sanitary matters involving engineering problems. The report should be a valuable one to sanitarians and health boards as showing the method of handling the numerous difficult problems that come up in questions of state-wide sanitation.

THEORETICAL PRINCIPLES OF METHODS OF ANALYTICAL CHEMISTRY BASED ON CHEMICAL REACTIONS. By M. G. Chesneau, Ingénieur en Chef des Mines. Authorized Translation by Azariah T. Lincoln, Ph.D., Assistant Professor of Chemistry, Rensselaer Polytechnic Institute, and David H. Carnahan, Ph.D., Associate Professor of Romance Languages, University of Illinois. Cloth. Price, $1.75 net. Pp. 184. New York: The Macmillan Company, 1910.

The object of this work is not primarily to increase the number of methods of analytical procedure, but to increase the exactness of the methods now in use, by investigations in the light of recent physicochemical theories. The electrolytic or ionic theory appeared to the author to be in contradiction, in many cases, to facts, established by experiments; therefore another means of explanation was sought. The author discusses the chemistry of analytical reactions on the basis of calorific phenomena involved in the ordinary reactions and of the laws deduced from the principles of thermodynamics. From the nature of the theories employed it is not a handbook for the beginner but rather a book which can be employed only in very advanced work in theoretical lines.

Association News

PROCEEDINGS OF THE ST. LOUIS SESSION

(Continued from page 2090, Vol. LIV)

Section Transactions

Those who desire copies of the 1910 Transactions of any of the sections, but who are not on the permanent subscription list, should order them at once, as printing will commence soon on several. Only enough are printed to supply the demand, and each year some persons order too late to be supplied. Each volume is a cloth-bound book containing the articles and discussions in that particular section. A volume is issued for each section except the Section on Stomatology. When ordered in advance, each book costs the subscriber $1.00, payable at time of delivery.

It is to be remembered that one may give a permanent order for Transactions; and those specified are sent, from year to year, until the order is cancelled. Address orders to the American Medical Association, 535 Dearborn Avenue, Chicago.

Minutes of Sections

The minutes of the proceedings of the sections at the sixty-first annual session, held at St. Louis, June 7 to 10, 1910, are given below.

SECTION ON PRACTICE OF MEDICINE

TUESDAY, JUNE 7—AFTERNOON

The Section was called to order by the Chairman, Dr. George Blumer, New Haven, Conn., at 2 p. m., in the Third Baptist Church.

Dr. Max Einhorn, New York, read a paper on "Experiences with the Duodenal Contents in Man." No discussion.

Drs. Harvey G. Beck and William Royal Stokes, Baltimore, read a paper on: "A Case of Diffuse Ventriculo-Septal Myocarditis with Adams-Stokes' Syndrome."

Dr. Isaac I. Lemann, New Orleans, read a paper on "A Study of a Case of Heart-Block with Auricular Alternating Pulse." These two papers were discussed by Drs. Haven Emerson, New York, and Albert E. Taussig, St. Louis.

Dr. Seale Harris, Mobile, Ala., read a paper on "The Radical Cure of Malaria; Its Importance and How It May Be Attained." Discussed by Drs. Charles MacLellan, Chicago; Arnold Taubitz, Neelysville, Mo.; W. E. Chapman, Sheboygan, Mich.; I. J. Woelf, Kansas City, Mo.; Vernon Blythe, Paducah, Ky.; S. P. Child, Kansas City, Mo.; C. C. Bass, New Orleans; Joseph H. Pratt, Boston; G. C. Smith, Boston; J. A. Witherspoon, Nashville, Tenn.; C. Shattinger, St. Louis; R. Alexander Bate, Louisville, Ky.; Arthur C. Bell, Dallas, Tex.; I. I. Lemann, New Orleans; B. W. Fontaigne, Memphis, Tenn.; J. A. Chilton, Van Buren, Mo.; T. J. Ragsdale, Lees Summit, Mo.; D. C. Walt, Little Rock, Ark.; A. H. Vandivort, St. Joseph, Mo.; A. Comingo Griffith, Kansas City, Mo.; Seale Harris, Mobile, Ala.

Dr. W. J. Calvert, Dallas, Tex., read a paper on "A Possible Differential Sign Between Cardiac Dilation and Pericarditis with Effusion." Discussed by Drs. Haven Emerson, New York, and W. J. Calvert, Dallas, Tex.

WEDNESDAY, JUNE 8—MORNING

The Section held a joint meeting with the Section on Pharmacology and Therapeutics for the consideration of papers in a Symposium on the Circulatory Disorders in Acute Infections. For the minutes of this meeting, see minutes of the Section on Pharmacology and Therapeutics.

WEDNESDAY, JUNE 8—AFTERNOON

Dr. Richard C. Cabot, Boston, delivered the Oration on Medicine, entitled, "A Study of Mistaken Diagnoses Based on the Autopsy Findings in One Thousand Cases."

The Chairman announced that the following would serve on the Nominating Committee: Drs. George Dock, New Orleans; Seale Harris, Mobile, Ala., and Horace D. Arnold, Boston.

Dr. William F. Boos, Boston, read a paper on "Magnesium Poisoning: A Study of Ten Cases." Discussed by Drs. P. S. Roy, Washington, D. C.; W. T. Engle, Grand Island, Neb.; Nathan Rosewater, Cleveland; H. E. Dunlop, Canton, Mo.; C. C. Conover, Kansas City, Mo.; J. W. Bolton, Iola, Kan.; L. Leroy, Memphis, Tenn.; J. D. Reid, Pilger, Neb.; W. H. Philp, St. Francis, Ark.; H. R. St. John, Alton, Kan.; G. R. Neff, Farmington, Iowa, and William F. Boos, Boston.

Dr. James B. Herrick, Chicago, read a paper on "Certain Popular but Erroneous Notions Concerning Angina Pectoris." Discussed by Drs. Joseph L. Miller, Chicago; G. W. McCaskey, Fort Wayne, Ind.; Gustav Baar, Portland, Ore.; S. P. Child, Kansas City, Mo.; J. A. Witherspoon, Nashville, Tenn.; Allen A. Jones, Buffalo, N. Y., and James B. Herrick, Chicago.

Drs. Thomas A. Claytor and Walter H. Merrill, Washington, presented a paper on "Orthodiagraphy: Presentation of a Series of Diagrams of the Heart and Aorta, with Explanatory Remarks." Dr. James G. Van Zwaluwenburg, Ann Arbor, Mich., read a paper on "The Diagnostic Value of the Orthodiagram." These two papers were discussed by Drs. Sidney Lange, Cincinnati; Thomas A. Claytor, Washington, and James G. Van Zwaluwenburg, Ann Arbor, Mich.

THURSDAY, JUNE 9—MORNING

The Committee on Nominations nominated the following: Chairman, Dr. A. Allen Jones, Buffalo, N. Y.; Vice-Chairman, Dr. D. C. L. Green, St. Paul, Minn.; Secretary, Dr. Wilder Tileston, New Haven, Conn.; Delegate, Dr. J. A. Capps, Chicago; Alternate, Dr. Alexander Lambert, New York; Orator, Dr. C. F. Hoover, Cleveland.

It was moved, seconded and carried that the Secretary be instructed to cast a ballot for these nominees.

Dr. Kate C. H. Mead, Middletown, Conn., read a paper on "Persistent Patency of the Ductus Arteriosus, Stenosis of the Isthmus of the Aorta, with Degeneration of the Coronaries of the Cardiac Muscle and of the Sino-Auricular Bundle." Discussed by Dr. Wilder Tileston, New Haven, Conn.

Dr. C. F. Hoover, Cleveland, read a paper on "Regional Vasomotor Hypertonus, with a Report of a Case." Discussed by Drs. Judson Daland, Philadelphia, and C. F. Hoover, Cleveland.

Drs. L. F. Barker, A. D. Hirschfelder and G. M. Bond, Baltimore, presented a paper on "The Electrocardiogram in Clinical Diagnosis." Discussed by Drs. M. J. Lichty, Cleveland; John H. Musser, Philadelphia, and A. D. Hirschfelder, Baltimore.

Dr. Claude A. Smith, Atlanta, Ga., read a paper on "Hookworm Infection and its Prevention." Discussed by Drs. Henry B. Ward, Urbana, Ill.; B. B. Bagby, West Point, Va.; C. C. Bass, New Orleans; Morgan Smith, Little Rock, Ark.; William Letterer, Nashville, Tenn.; John William Colbert, Albuquerque, N. M., and Claude A. Smith, Atlanta, Ga.

Drs. Louis B. Wilson and Byrd C. Willis, Rochester, Minn., read a paper on "Pathologic Relationship of Ulcer and Carcinoma of the Alimentary Canal." Discussed by Drs. H. E. Robertson, Minneapolis; J. N. Hall, Denver; Frank Wilbur Foxworthy, Indianapolis; D. C. Walt, Little Rock, Ark.; Charles G. Stockton, Buffalo, N. Y.; Richard Weil, New York; John A. Lichty, Pittsburg, Pa.; Abraham Jacobi, New York; Hugo A. Freund, Detroit; Harvey G. Beck, Baltimore; G. C. Smith, Boston; Frank Smithies, Ann Arbor, Mich.; T. Potter, Indianapolis, and Louis B. Wilson, Rochester, Minn.

THURSDAY, JUNE 9—AFTERNOON

Dr. H. D. Arnold, Boston, read a paper on "The Importance of a Low Protein Diet in Chronic Nephritis." Discussed by Drs. G. C. Smith, Boston; P. S. Roy, Washington, D. C., and H. D. Arnold, Boston.

Dr. W. W. Duke, Baltimore, read a paper on "The Relation of Blood Platelets to Bleeding in Certain Cases of Purpura." Discussed by Drs. J. H. Pratt, Boston, and W. W. Duke, Baltimore.

Dr. John D. Dunham, Columbus, Ohio, read a paper on "Clinical Results of Gastroenterostomy for Non-Malignant Diseases." Discussed by Drs. Judson Daland, Philadelphia; M. J. Lichty, Cleveland, Ohio; John A. Witherspoon, Nashville, Tenn.; DeLancey Rochester, Buffalo, N. Y.; A. L. Benedict, Buffalo, N. Y.; Gustav Baar, Portland, Ore., and John D. Dunham, Columbus, Ohio.

Dr. M. J. Lichty, Cleveland, read a paper on "The Influence of Perigastric Lesions on Gastric Secretions, Based on Clinical and Experimental Study." Discussed by Drs. DeLancey Rochester, Buffalo, N. Y.; James T. Pilcher, Rochester, Minn.; A. L. Benedict, Buffalo, N. Y.; G. C. Smith, Boston; Gustav Baar, Portland, Ore.; John A. Lichty, Pittsburg, Pa., and M. J. Lichty, Cleveland, Ohio.

Dr. Gustav Baar, Portland, Ore., read a paper on "Indicanuria." Discussed by Drs. DeLancey Rochester, Buffalo, N. Y.; Judson Daland, Philadelphia; Jay I. Durand, Atlantic City, N. J.; C. Shattinger, St. Louis, and Gustav Baar, Portland, Ore.

Drs. Judson Daland and George E. Pfahler, Philadelphia, presented a paper on "The Roentgen Ray in the Diagnosis of Diseases of the Alimentary Tract." Discussed by Drs. J. N. Hall, Denver; A. W. Crane, Kalamazoo, Mich.; M. J. Lichty, Cleveland, and Judson Daland, Philadelphia.

FRIDAY, JUNE 10—MORNING

Dr. Anders Frick, Chicago, read a paper on "The Different Forms of Mediastinal Exudative Pleurisy, with Report of Three Cases." Discussed by Drs. DeLancey Rochester, Buffalo, N. Y.; Frank Smithies, Ann Arbor, Mich., and Anders Frick, Chicago.

Dr. Frank Smithies, Ann Arbor, Mich., read a paper on "The Diagnostic Significance of the Paravertebral Triangle of Percussion Dulness (Grocco's Sign)." No discussion.

Dr. Edward C. Rosenow, Chicago, read a paper on "Autogenous Vaccine Therapy in Endocarditis." No discussion.

Dr. Willard J. Stone, Toledo, Ohio, read a paper on "The Treatment of Typhoid Carriers, with Report of a Case Treated by Inoculations of Typhoid Vaccine." Discussed by Drs. John J. Buettner, Syracuse, N. Y.; James J. Terrill, Galveston, Tex., and Willard J. Stone, Toledo, Ohio.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN

TUESDAY, JUNE 7—AFTERNOON

The Section was called to order at 2 p. m., in Association Hall, Y. M. C. A. Building, by the Chairman, Dr. John G. Clark, Philadelphia.

Dr. William S. Gardner, Baltimore, read a paper on "Infections of the Endometrium." Discussed by Dr. Novak.

Dr. Henry O. Marcy, Boston, read a paper on "The Plastic Surgery of the Pelvic Structures." Discussed by Drs. Gilliam, Gilbert, Hayden, Hall, Shoemaker, Glasgow, Rosenthal, Hinchey and Marcy.

Dr. Sidney A. Chalfont, Pittsburg, read a paper on "Arteriosclerosis of the Uterine Vessels." Discussed by Drs. Novak and Foulkrod.

Dr. Samuel Wyllis Bandler read a paper on "An Ideal Operation for the Cure of Total Prolapse of the Uterus." Discussed by Drs. Carstens, Goffe, Lawrence, Baldy and Bandler.

Dr. George Erety Shoemaker read a paper on "Papillary Cystadenoma of the Kidney, Associated with Myoma of the Uterus and Spinal Caries." No discussion.

Dr. J. H. Carstens read a paper on "Uselessness of Local Treatment in Puerperal Sepsis." Discussed by Drs. Zinke, Wetherill, Boldt, Glasgow, Schwartz and Carstens.

WEDNESDAY, JUNE 8—MORNING

The following papers were read and discussed as a symposium on observations by inventors of operations for retroflexion of the uterus:

Dr. R. C. Coffey, Portland, Ore.: "Plication of the Round and Anterior Fold of the Broad Ligament on the Anterior Surface of the Uterus for Retrodisplacement."

Dr. J. M. Baldy, Philadelphia: "Attachment of Ligaments Posterior to the Uterus."

Dr. D. Tod Gilliam, Columbus, O.: "Intraperitoneal Implantation of Round Ligaments."

Dr. F. F. Simpson, Pittsburg, Pa.: "Intraperitoneal Shortening of Round Ligaments (Simpson operation)."

Dr. A. Goldspohn, Chicago: "Shortening of the Round Ligaments Via the Temporarily Dilated Inguinal Canals Combined with the Bassini Technic in Closure of the Wounds."

Dr. E. C. Dudley, Chicago: "Resumé of the Surgical Treatment of Retrodeviations of the Uterus."

These six papers were discussed by Drs. Montgomery, Murphy, Boldt, Carstens, Barrett, Marcy, Wathen, Massey, Gellhorn, Byford, Baldy, Gilliam and Simpson.

WEDNESDAY, JUNE 8—AFTERNOON

The meeting was called to order at 2 p. m. by the Vice-Chairman, Dr. C. C. Frederick, Buffalo.

Dr. John G. Clark, Philadelphia, read his Chairman's Address entitled "Embryologic and Anatomic Causes for Obstinate Constipation in Women; Operative Methods for Relief." Dr. E. E. Montgomery of Philadelphia moved that a vote of thanks be given Dr. Clark for his very able presentation. Seconded and carried.

The following five papers were read and discussed as a Symposium on Enteroptosis:

Dr. Richard R. Smith, Grand Rapids, Mich., read a paper on "Enteroptosis, with Special Reference to Its Etiology and Development, and Remarks on the Results of Examination of 400 Women, with Reference to This Condition."

Dr. E. H. Skinner, Kansas City, Mo., read a paper on "The *X*-Ray in the Diagnosis of Enteroptosis."

Dr. A. W. Crane, Kalamazoo, Mich., read a paper on "Value of the Roentgen Ray in Enteroptosis."

Dr. John H. Musser, Philadelphia, read a paper on "The Physician's Viewpoint."

Dr. A. J. Ochsner, Chicago, read a paper on "The Surgical Viewpoint."

These five papers were discussed by Drs. Einhorn, Coffey, Korsell, Carstens and Crane.

THURSDAY, JUNE 9—MORNING

The Nominating Committee reported the following nominations: Chairman, Dr. Horace G. Wetherill, Denver; Vice-Chairman, Dr. Fred J. Taussig, St. Louis; Secretary, Dr. C. Jeff Miller, Louisiana; Delegate, Dr. A. E. Benjamin, Minnesota; Alternate, Dr. S. W. Bandler, New York.

The report was accepted and the nominees were elected.

The report of the Cancer Committee, Dr. Horace G. Wetherill, Chairman, recommended an active and educational campaign along the lines indicated in the report of the Committee of 1906, and urged anew that the Section on Obstetrics and Diseases of Women cooperate with the Board of Public Instruction on Medical Subjects [now the Council on Health and Public Instruction] in an energetic effort to educate women to an appreciation of the early signs of cancer and to the importance of an examination by a competent physician; and that all available resources be exhausted in an endeavor to impress on each member of the profession his personal responsibility for an early and accurate diagnosis of cancer and a timely removal of the growth by a competent surgeon. On motion of Dr. Dorsett the report was accepted.

Dr. J. Riddle Goffe, New York City, read a paper on "Tuberculosis of the Female Organs of Generation and the Peritoneum." Discussed by Drs. Novak, Frederick, Gilmore, Byford, Gilliam, A. Miles Taylor, and Goffe in closing.

The following four papers were read and discussed as a Symposium on Carcinoma of the Uterus:

Dr. John A. Sampson, Albany, N. Y.: "The Participation of the Glandular System and Tissues Adjacent to the Uterus in Carcinoma of the Uterus."

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Dr. J. H. Jacobson, Toledo, O.: "The Results Obtained by the Radical Abdominal Operation for Carcinoma of the Uterus."

Dr. Emil Ries, Chicago: "The Diagnosis of Operability of Carcinoma of the Cervix of the Uterus."

Dr. C. C. Frederick, Buffalo, N. Y.: "Further Observations on the Use of the Cautery in the Treatment of Carcinoma of the Uterus."

These four papers were discussed by Drs. Gellhorn, Peterson, Goldspohn, Mosier, Wetherill, Jacobson and Ries.

THURSDAY, JUNE 9—AFTERNOON

The Vice-Chairman, Dr. C. C. Frederick, Buffalo, N. Y., called the meeting to order at 2 p. m.

Dr. Channing W. Barrett, Chicago, read a paper on "The Place of Hebosteotomy as an Aid to Delivery." Discussed by Drs. Zinke, Foulkrod, Fry, Burns and Barrett.

The report of the Committee on Revision of the Pharmacopeia was presented, and on motion adopted.

The following five papers were read and discussed as a Symposium on Eclampsia:

Drs. E. P. Davis and Collin Foulkrod, Philadelphia: "The Etiology of Eclampsia"; read by Dr. Foulkrod.

Drs. Edwin B. Cragin and Edward T. Hull, New York: "Treatment of Eclampsia, Including a Comparison of the Dangers of Chloroform and Ether in this Condition"; read by Dr. Hull.

Dr. Henry D. Fry, Washington: "Vaginal Cesarean Section in Eclampsia."

Dr. Reuben Peterson, Ann Arbor, Mich.: "Indications for and Technic of Rapid Emptying of the Uterus in the Toxemias of Pregnancy."

Dr. Joseph B. De Lee, Chicago: "The Surgical Treatment of Eclampsia"; read by the Secretary, Dr. C. Jeff Miller.

These five papers were discussed by Drs. Schwartz, Zinke, Carstens, Blondhe, Burns, Rosenthal, Ritter, Foulkrod, Hull, Fry and Peterson.

SECTION ON SURGERY

TUESDAY, JUNE 7—MORNING

The meeting was called to order at 2 p. m. in the Odeon Theater.

Dr. Charles H. Mayo, Rochester, Minn., the Chairman, delivered his address on "Prophylaxis of Cancer."

Dr. A. Primrose, Toronto, Canada, read a paper on "Surgical Treatment of Compression Paraplegia."

Dr. W. W. Grant, Denver, read a paper on "Anastomosis of Facial and Spinal Accessory Nerves and the Distal End of Spinal Accessory, with Descending Hypoglossal."

These two papers were discussed by Drs. J. B. Murphy, J. T. Bottomley, A. Primrose and W. W. Grant.

Dr. Henry H. Sherk, Pasadena, Cal., read a paper on "Injuries of Abdominal Viscera without External Signs of Violence." Discussed by Drs. M. H. Richardson and Hough.

Dr. E. E. Irons, Chicago, read a paper on "Present Status of Vaccinotherapy." Discussed by Drs. J. B. Deaver, A. W. Crane, W. W. Grant and E. E. Irons.

Dr. H. C. Deaver, Philadelphia, read a paper on "Appendicitis in Children, with Report of Five Hundred Cases." Discussed by Drs. L. S. McMurtry, E. Vander Veer, Lucid, M. Rosenthal, H. Tuholske and J. B. Deaver.

WEDNESDAY, JUNE 8—MORNING

Dr. E. H. Ochsner, Chicago, read a paper on "Final Results in Dislocation of the Hip." Discussed by Drs. A. J. Gillette, J. P. Lord and E. H. Ochsner.

Dr. L. W. Ely, New York, read a paper on "Tuberculosis of Adult Knee-Joint, with New Theory and Plan of Operation."

Dr. J. B. Murphy, Chicago, read a paper on "Acute and Chronic Joint Infections and their Surgical Treatment."

These two papers were discussed by Drs. J. T. Moore, Pearse, A. J. Ochsner, J. F. Binnie, L. W. Ely and J. B. Murphy.

Dr. R. Abbe, New York, delivered the Oration on Surgery, entitled "Radium: A Contribution to Surgery."

Dr. A. F. Jonas, Omaha, Neb., read a paper on "Open Treatment of Fractures." Discussed by Drs. E. W. Andrews, Pearse, J. L. Crook and A. F. Jonas.

Dr. J. T. Bottomley, Boston, read a paper on "Congenital Atresia of Ureter." Discussed by Drs. D. N. Eisendrath and S. E. Sanders.

Dr. C. A. L. Reed, Cincinnati, read a paper on "Extracapsular Fixation of Kidney." Discussed by Dr. S. Lloyd.

WEDNESDAY, JUNE 8—AFTERNOON

Dr. T. S. Cullen, Baltimore, read a paper on "Surgical Diseases of the Umbilicus." Discussed by Drs. W. D. Haggard and T. S. Cullen.

Dr. O. C. Gaub, Pittsburg, Pa., read a paper on "Traumatic Rupture of the Fixed Portion of the Male Urethra." Discussed by Drs. H. M. Sherman, Corrigan, P. Syms, Anderson, H. Cabot, H. H. Young and O. C. Gaub.

Dr. D. S. Fairchild, Clinton, Iowa, read a paper on "Surgical Considerations in the Treatment of Chronic Suppurative Nephritis." Discussed by Drs. A. H. Ferguson and D. S. Fairchild.

Dr. Miles F. Porter, Fort Wayne, Ind., read a paper on "Kidney and Ureteral Stone." Discussed by Drs. H. H. Young, Sumter, M. H. Richardson, J. B. Deaver, Elam, M. Ballin, Mahoney, A. D. Bevan and Miles F. Porter.

Dr. T. C. Witherspoon, Butte, Mont., read a paper on "Surgery of Congenital Cystic Kidney." Discussed by Drs. D. N. Eisendrath, C. M. Nicholson, J. E. Moore and T. C. Witherspoon.

Dr. J. F. Percy, Galesburg, Ill., read a paper on "Phrenitis Prostatica." Discussed by Drs. H. N. Moyer and J. F. Percy.

THURSDAY, JUNE 9—MORNING

Dr. R. Winslow, Baltimore, read a paper on "Partial Tyroidectomy in Dementia Præcox." No discussion.

Dr. H. S. Plummer, Rochester, Minn., read a paper on "Diagnosis and Treatment of Esophageal Lesions." Discussed by Drs. W. Meyer and H. S. Plummer.

Dr. George W. Crile, Cleveland, Ohio, read a paper on "Certain Surgical Aspects of Goiter." Discussed by Drs. A. J. Ochsner, A. MacLaren, M. B. Tinker, W. R. Cubbins, C. H. Mayo and George W. Crile.

Dr. A. D. Bevan, Chicago, read a paper on "Surgical Management of Suppurative Peritonitis." Discussed by Drs. W. L. Rodman, W. H. Wathen, J. P. Runyan, Cahill, J. B. Murphy, A. J. Ochsner and A. D. Bevan.

Dr. F. McRae, Atlanta, Ga., read a paper on "Conservative Surgery of Pelvis and Lower Abdomen." Discussed by Drs. A. H. Ferguson, J. M. Baldy, Fowlkes, Schmauss, Murphy and McRae.

The Nominating Committee made the following nominations: Chairman, Dr. George W. Crile; Vice-Chairman, Dr. E. Rixford; Secretary, Dr. J. T. Bottomley; Orator, Dr. George E. Brewer; Delegate, Dr. A. F. Jonas.

The report of the Nominating Committee was accepted and the nominees were elected.

Dr. A. MacLaren, St. Paul, Minn., read a paper on "Some Further Experiences with Drainage of Pelvic Abscess Through the Rectum." Discussed by Drs. J. M. Baldy, M. H. Richardson and A. MacLaren.

THURSDAY, JUNE 9—AFTERNOON

Drs. R. Matas and C. W. Allen, New Orleans, presented a paper on "Temporary and Permanent Occlusion of the Large Arteries with Metallic Bands." Discussed by Drs. George W. Crile, D. N. Eisendrath and C. W. Allen.

Dr. W. L. Rodman, Philadelphia, read a paper on "Diagnosis of Mammary Cancer."

Dr. M. H. Richardson, Boston, read a paper on "Operative Treatment of Cancer of the Breast."

These two papers were discussed by Drs. W. Meyer, P. Syms, H. Tuholske, Miles F. Porter, W. L. Rodman and M. H. Richardson.

Dr. R. C. Coffey, Portland, Ore., read a paper on "Physiologic Implantation of Severed Ureter or Bile Duct into Intestine." Discussed by Drs. A. G. Sullivan, J. W. D. Maury and R. C. Coffey.

Dr. Le Grand Guerry, Columbia, S. C., read a paper on "A Further Consideration of Cholecystenterostomy in Certain Cases of Pancreatitis."

Dr. J. P. Runyan, Little Rock, Ark., read a paper on "Pathology of Gall-Bladder and Gall-Tract."

These two papers were discussed by Dr. Schmauss.

Dr. A. M. Pond, Dubuque, Iowa, read a paper on "Inguinal Hernia Following Appendectomy." Discussed by Dr. E. W. Andrews.

Dr. M. B. Tinker, Ithaca, N. Y., read a paper on "Teaching the Principles of Surgery: The Ideal and the Practical." Discussed by Drs. J. Stewart and L. Hirschman.

Dr. L. J. Hirschman, Detroit, read a paper on "A Simple Operation for Hemorrhoids without Hemorrhage." No discussion.

SECTION ON OPHTHALMOLOGY

TUESDAY, JUNE 7, 1910—MORNING

The Chairman, Dr. W. C. Posey, Philadelphia, called the meeting to order at 2 p. m. in Aschenbroedel Hall, 3535 Pine Street. He then delivered his address on "Examination of the Eyes in the Public Services in the United States."

Dr. W. H. Wilder, Chicago, offered a resolution concerning the Chairman's address, which on motion was adopted, and which recommended that the President of the Association be empowered to appoint a commission to cooperate with the Department of Commerce and Labor and with the Marine Hospital Corps in establishing proper visual standards and tests to govern state and federal pilots. [The text of this resolution is given in THE JOURNAL, June 18, 1910, p. 2069, and its adoption by the House of Delegates is noted on page 2076.]

Dr. R. L. Randolph, Baltimore, read a paper on "Question of Enucleation in Purulent Panophthalmitis, Together with Brief Experimental Study of the Subject." Discussed by Drs. L. Webster Fox, Philadelphia; C. J. Kipp, Newark, N. J.; L. H. Taylor, Wilkesbarre, Pa.; C. H. Williams, Boston; S. L. Ledbetter, Birmingham, Ala.; E. C. Ellett, Memphis, Tenn.; A. E. Prince, Springfield, Ill.; S. L. Ziegler, Philadelphia; Edward Jackson, Denver; Hiram Woods, Baltimore, and R. L. Randolph, Baltimore.

Dr. Percy Fridenburg, New York, read a paper entitled "A Study of Transillumination." Discussed by Dr. Edward Jackson, Denver, and R. D. Gibson, Youngstown, Ohio.

Dr. S. L. Ziegler, Philadelphia, read a paper on "The Radical Treatment of Lacrimonasal Disease by Rapid Dilatation and Allied Measures." Discussed by Drs. H. Moulton, Fort Smith, Ark.; J. L. Thompson, Indianapolis; J. A. Donovan, Butte, Mont.; C. H. Williams, Boston; Mr. J. H. Parsons, London; Drs. John E. Weeks, New York; Hiram Woods, Baltimore, and S. L. Ziegler, Philadelphia.

Dr. Arnold Knapp, New York, read a paper on "Intermittent Closing of the Retinal Arteries." Discussed by Drs. W. C. Posey, Philadelphia; L. Connor, Detroit; William Zentmayer, Philadelphia; J. L. Thompson, Indianapolis; M. Feingold, New Orleans; Wendell Reber, Philadelphia; E. C. Ellett, Memphis, Tenn.; Haughey, Battle Creek, Mich.; A. Greenwood, Boston, and Arnold Knapp, New York.

In the absence of Dr. Alvin Hubbell, Buffalo, a member of the Executive Committee, who was ill, Dr. Lewis H. Taylor, Wilkes-Barre, Pa., was appointed on that committee.

The Committee on Promotion of Family Physician Refracting presented its report, as follows:

REPORT OF COMMITTEE ON PROMOTION OF FAMILY PHYSICIAN REFRACTING

Your committee appointed under resolutions relative to Chairman Hubbell's address, 1909, begs leave to report progress.

These resolutions affirm that every physician's equipment should enable him to do two things; to manage infectious eye diseases, and to determine the refractive defects of the eye. These resolutions also instruct your committee to report on methods for insuring such equipment. The problem thus given us is both broad and complicated; broad in that it affects individually every doctor and citizen; complicated in its relations to medical education, state boards of registration, medical societies, medical journals and popular sentiment. With our time limit, the committee has given it such study as was possible and submits the following:

Since economic reasons prevent a great increase of ophthalmologists, we turn to family doctors, who number about 130,000. If these could do simple refracting, and the entire number of eyes were divided among them, each would have about 1,200—a number possible for adequate refractive service. Of these, the most complicated, in population centers, would fall to the ophthalmologist; the simple and those distant from population centers, to the family doctor. Thus the profession would form a refracting army, family physicians being the soldiers, ophthalmologists the officers—unitedly able to refract and keep refracted the entire 180,000,000 human eyes.

Family physician refracting will be defined differently by individuals, but your committee defines it as "that training which enables its possessor (1) to recognize a normal ocular fundus with the ophthalmoscope, and (2) by test cards and simple lenses to determine those that give the best sight with least discomfort to simple presbyopes, myopes and hyperopes." The ability to do these two things, with celerity and positiveness, opens the door to such other things as complete his equipment.

To meet the present conditions the medical college curriculum must be adjusted and young physicians and such other physicans as have leisure encouraged to master it. For this the medical society, medical press, medical books and personal friendship must be utilized. Most important is the State Board of Registration. As the people's representative, it should refuse license to those ignorant of simple refraction. Much remains to interest some of these boards in this part of their duty, and especially in their becoming personally qualified therefor. Thus, from start to finish, the work of your committee is educational.

For study of the subject, your Committee held meetings in Atlantic City, New York, Philadelphia, Baltimore and St. Louis. Its members kept in touch with each other by frequent correspondence. Individually its members discussed the matter with fellow doctors, singly or in groups, as opportunity admitted. Rarely did they fail to win to the cause a friend, if time allowed a fair presentation of facts. Not rarely did these friends present novel ideas and helpful suggestions. Thus during a journey with a member of a state board of registration, while discussing the quantity and quality of ophthalmology a family physican ought to be able to practice, the physican said, as a substantial agreement was reached, "Fix up details as briefly as possible, send to me, and I will see that our board requires the same for license." His state now requires simple refracting for license, as he educated his board. Yet he was simply a family physician of good education, faithful in his endeavor to serve the people.

We found objections to family physician refracting mainly based in two classes of reasons—lack of broad comprehension of the subject, or selfish interest. Usually the removal of the first carried the second. All granted that a family physician ought to be qualified for simple refracting, even when conditons forbade its practice, but they doubted its possibility. Often this doubt was removed by showing that family physicians had mastered the art and were practicing it under unfavorable conditions. Many ophthalmologists find it hard to realize that simple refraction can be safe, or of practical value. They forget that, while a family doctor may open a felon, amputate a finger, and do other minor surgery easily, he may not operate for appendicitis. So in time they will learn that the family doctor can satisfactorily do simple refracting, leaving to the ophthalmologist complicated refracting; that a knowledge of personal limitations will restrain him from exceeding them; and that his little knowledge will check any tendency to practice in ignorance.

With a view of stimulating state boards of registration to make a practical study of family physican refracting and to adopt such requirements as would encourage medical colleges in its teaching, your Committee prepared the following circular letter and mailed a copy, within a sealed envelope, to members of each board:

Nov. 11, 1909.

"Dear Doctor ————:"

At the late meeting of the Section on Ophthalmology, American Medical Association (eleven hundred members), the undersigned were appointed a committee to promote a working knowledge of simple refraction among family physicians.

It has secured abundant evidence that such knowledge has been acquired and is now used by many physicians, so proving that all medical men can do likewise, if they so desire.

But that the practice may become uniform, it is necessary that the state boards of registration require it for license and medical colleges teach it in course.

Recognizing its importance, the Michigan State Board of Registration, on Feb. 12, 1909, notified medical colleges that thereafter it would grant licenses to practice only to such applicants, as demonstrated, on a living subject, with simple spherical lenses and test types, their working knowledge of simple refraction.

Your Committee is confident that every state board of registration would make a like requirement, if it grasped the situation; and then all medical colleges would qualify their students therefor.

Recalling the fact that our system of medical education makes no adequate provision for training the family physician in simple refraction, and that it is impossible for experts to meet the needs of all the people in this respect, it is plain that this class of cases had no source of relief other than the optician. But if the state boards require a working knowledge of simple refraction for license, the needs of all the people will be fully met by qualified physicians, and the optician resumes his normal vocation as a spectacle merchant.

Recognizing your great influence in medical affairs, and assuming your vital interest in enlarging the field of family practice, your Committee confidently ask your active endeavor to persuade your state board of registration to require "a working knowledge of simple refraction" from each applicant for license.

Each member of your Committee stands ready to assist you to a fuller understanding of the situation, or to cooperate with you in seeking its relief.

With thanks for your aid, and a report of your success, we remain, dear doctor,

Sincerely yours,

LEARTUS CONNOR, Detroit, Chairman.
A. R. BAKER, Cleveland, Ohio.
J. THORINGTON, Philadelphia.

Further, a copy of this letter was also sent to officers of a few medical societies, medical journals, medical colleges and other leaders in the profession. Courteous replies were promptly received, some seeking further details, that led to extended correspondence. In December, 1909, the State Board of Registration in Nebraska announced that it would require a working knowledge of simple refraction as a condition for license; in January 1910, Vermont and Utah made similar announcement; Michigan had already been operating the same requirement since Feb. 12, 1909. Replies from other states may be summarized thus:

1. In some the laws did not admit of such specific examination and more time was needed to induce legislatures to make needed changes.

2. Other boards reported that as their individual members knew nothing of refraction they were unable to examine applicants thereupon, but that they would keep the matter under consideration and hoped in the near future to qualify themselves.

3. Other boards reported such an unstable political status that they feared any agitation lest they lose what they already possessed; they promised strong efforts for creating a better public sentiment.

4. Some states desired more time for study of methods for making the proposed examinations a success.

5. No state doubted the wisdom of the suggested requirement; and those unable to make it now regretted the inability and hoped to be able to make the requirement in the near future.

6. Much correspondence was reqfired to make clear the best methods for conducting the examinations, the proper text-books, apparatus, etc., under the varying conditions of the boards, which your Committee conducted with its best judgment.

While medical colleges were not appealed to directly, for lack of time, some, on learning of the Michigan State Board of Registration requirements, voluntarily undertook the preparation of their students therefor. The Association of American Medical Colleges

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invited your Committee to meet it at Baltimore last March and contribute to the untangling of its problems. Two of the members of your Committee were present, the other being prevented by illness from attending. One read a paper on the "Economic Value of Simple Refracting," which was discussed, and both discussed several points relating to simple refraction in the general medical curriculum. Primarily they sought to interest members in simple refracting.

MEDICAL JOURNALS

From the editorials relative to simple refraction we can refer only to two brief extracts. The *Boston Medical and Surgical Journal*, Dec. 9, 1909, p. 865, says: "It is apparent that a need exists in the community that has not been met by the medical profession, and we are therefore in complete accord with the efforts of this committee of the Ophthalmic Section of the American Medical Association to impress on medical schools the importance of teaching simple refraction, not in special courses, but rather as part of the general medical discipline. The pressure to bring this about must, no doubt, in a measure come from state boards of registration, but we do not question that the medical schools will be quick to recognize the desirability of instituting such undergraduate instruction. While there will be some opposition by interested parties, we have no doubt that the best interests of the public will ultimately be subserved through the complete assumption of this work by the medical profession, to which it properly belongs."

The *Medical Record*, of St. Louis, Mo., after quoting the Committee's letter, restates the vexed problem of the itinerant optician and endorses the solution offered, viz., "make doctors good refractionists themselves." It thinks that the medical colleges could easily make space for simple refraction by omitting some of the things now in the course, but absent from every physician's needs in practice. Thus the addition of simple refraction would even lessen the student's burden. "The new movement is a good one and deserves hearty support."

STATE MEDICAL SOCIETIES

The able secretary of the Kentucky State Medical Society last fall secured some reprints of a paper on simple refracting and distributed them among his members. This brought on a lively discussion at its annual meeting, but in the end the practice was endorsed. It is certain that a skillful arrangement the subject could be brought before other state medical societies. Whether the result was approval or disapproval, the facts would receive consideration, and new friends made, which in turn would make other friends, and so the promotion of simple refracting advances. In fact, the movement started in the Michigan State Medical Society in 1908.

SPECIAL CONFERENCE OF OPHTHALMOLOGISTS WITH STATE SOCIETY OFFICERS

On May 3, 1910, the Detroit Ophthalmological Club invited to a Conference on the Economic Value of Family Physician Refracting, the officers of the Michigan State Medical Society; those of the Wayne County Medical Society; those of the Michigan State Board of Registration; the Deans of the Medical Department of the University of Michigan and Detroit Medical College, and two family physicians doing simple refracting. After a discussion lasting several hours, the club unanimously passed the following resolutions, offered by the professor of ophthalmology in Detroit Medical College, Dr. Don M. Campbell:

WHEREAS, Family physician refracting promotes the cooperation of family physician and ophthalmologist; provides physicians adequate to the people's refractive needs; enriches ophthalmology and ophthalmologists; generates medicine and family doctor; strengthens medical organization, and solves the optician problem.

Resolved, That the Detroit Ophthalmological Club endorses the action of the Section of Ophthalmology of the American Medical Association in promoting family physician refracting; the action of the Michigan Medical Society in seeking to educate its members to meet the people's refractive needs; the action of the Kentucky State Medical Society, endorsing the Michigan idea of family physician refracting; the action of medical colleges in substituting family physician ophthalmology for special ophthalmology, and the action of the state boards of registration in Michigan, Vermont, Nebraska and Utah, in requiring for license, a working knowledge of refracting.

Resolved, That the Detroit Ophthalmological Club urge state boards of registration to require (1) for license, family physician refracting, and (2) for the right to practice ophthalmology, a comprehensive laboratory and clinical study, after securing a license.

Resolved, That the Detroit Ophthalmological Club encourage family physicians to qualify for intelligent cooperation with ophthalmologists by equipping themselves for refracting.

It is noteworthy that most members of this conference two years previous were antagonistic to the movement. When conditions are favorable your Committee commends the holding of similar conferences. As ophthalmologists become interested they will take the matter up with their county medical societies. It is suggested that if they can secure the attendance of one or more family doctors who practice family physician refracting and have them give their actual experience, the outcome will be more.

It will surprise not a few ophthalmologists to learn of the satisfactory, useful refracting done in far away locations.

VIEWS FROM LEADERS IN THE PROFESSION

Space admits quotations from only three. Dr. William C. Gorgas, President of American Medical Association says: "Your circular letter of November 13 is acknowledged. I think the plan you outline is excellent."

Dr. Charles A. L. Reed, Ex-President of the American Medical Association says: "The plan to require a working knowledge of simple refraction by all candidates for medical licensure is capital and distinctively the logical remedy for the "optometric evil" that seems to threaten the eyes of all the people."

Dr. W. W. Grant, of Denver: "Your communication in regard to simple refraction by the family physician is received. It will give me pleasure to advance the action suggested with our state board. I believe the action of your state board of registration to be wise, timely and greatly to its credit."

Your Committee commends wise efforts to secure the attention of leaders in the profession by suitable circular or private letters, especially in keeping them posted as to the places and lines where greatest progress is being made, and suggesting their active effort in some specific direction.

Your Committee recommends:

1. The continued promotion of family physician refracting.

2. The authorization of your Committee to select in each state an auxiliary committee of three physicians, especially adapted to deal with State problems in simple refracting promotion.

RECENT PAPERS RELATING TO FAMILY PHYSICIAN REFRACTING

1. Baker, A. R.: "Teaching of Ophthalmology," *Cincinnati Lancet-Clinic*, May 14, 1910.

2. Connor, Leartus: "The Economic Value of Family Physician Refracting." *Bull. Am. Acad. Med.*

3. Connor, Leartus: "Conference of Ophthalmologists with Organization Leaders," THE JOURNAL A. M. A., May 28, 1910, p. 1820.

4. Thorington, James O.: "Refracting Opticians." *Pennsylvania Med. Jour.*, February, 1910.

5. Connor, Leartus: "General Practitioner and Simple Refracting," THE JOURNAL A. M. A., April 10, 1909, p. 1195.

6. Connor, Leartus: "Ophthalmology for General Practitioners," THE JOURNAL A. M. A., Nov. 28, 1908, 1853.

7. Connor, Leartus: "Layman Occupancy of Large Patches in the Field of Medical Practice," *Jour. Michigan State Med. Soc.*, May, 1909.

8. Connor, Leartus: "The Needs of the Entire Field of Medical Practice, the Rational Standard of a System of Medical Education," *Bull. Am. Acad. Med.*, No. 5.

9. Connor, Leartus: "Simple Refracting for Family Physicians, Its Promotion During 1908-9," THE JOURNAL A. M. A., Oct. 9, 1909, p. 1226.

LEARTUS CONNOR, Chairman.
ALBERT R. BAKER.
J. THORINGTON.

The Committee for Legislation on Optometry then presented its report, as follows:

REPORT OF COMMITTEE FOR LEGISLATION ON OPTOMETRY

The Committee for Legislation on Optometry report to the Section on Ophthalmology that prior to its appointment at Atlantic City in 1909 twenty-four states had passed laws recognizing the optical trade as a quasi-medical profession; that since the Committee took office no states have passed such law. Late in 1909 Massachusetts, Connecticut, Pennsylvania, Illinois, Missouri and Texas rejected "optometry" bills, while in the current year Massachusetts, New Jersey, Maryland and Ohio have followed up the good work by similar action.

The partial medical work of the optician has been tolerated; but, not content with that, he seeks to have his work legalized. In many states the step from toleration to legalization has been easy, as the political activity of the optician has encountered but little resistance from the masterly inactivity of most oculists and general medical practitioners.

Legalization is but a back-door entrance into medical practice, as shown by the curriculum of their schools and the questions asked by their optometry examining boards. If you wish medicine for medical men and ophthalmology for oculists you must at least be active citizens and show actively and aggressively your wishes and your objections in this matter.

We, cognizant of what has happened in the past and what is threatened in the future, say that so-called "optometry" should not be recognized in any way, that we should cry "No recognition and no compromise!" on all occasions.

But in this stand we must ask the active support of our profession in checking this fad, and if such support be accorded we are certain that these advertising tradesmen will make little or no progress in the future.

The American Medical Association will probably publish in the near future a history of the claims, schools and legislative efforts of the opticians, to be used as a text-book or brief by medical societies in the states where this question is still to be fought.

We freely give our efforts, but we ask aid rather than opposition from our own ranks.

Resolutions which will now be read embody our ideas in regard to this entire question.

JOHN C. BOSSIDY.
JAMES THORINGTON.

Dr. H. Woods, Baltimore, offered the following resolution concerning the report of the Committee on Promotion of Family Physician Refracting and moved its adoption:

Recommendations of a committee appointed by chairman of the Section on Ophthalmology, 1909, on teaching in medical colleges of infectious diseases of the eye and refractive errors:

WHEREAS, The refracting of human eyes is an important part of medical practice; and

WHEREAS, The Section on Ophthalmology of the American Medical Association recommends that "every general practitioner should have the training in ophthalmology which will enable him to manage infectious diseases of the eye and its refractive defects."

Resolved, That the House of Delegates of the American Medical Association (1) requests its Council on Medical Education to arrange a curriculum able to equip medical students with such training, and recommends medical colleges to adopt the same; (2) approves of the state registration boards now requiring it for license; and (3) advises like action by other state registration boards at an early date.

The motion was seconded.

Dr. J. Thorington, Philadelphia, a member of the Committee on Optometry Legislation, offered a resolution concerning the report of the Committee on Optometry Legislation, the text of which is given in THE JOURNAL, June 18, 1910, p. 2069, and which urges that legal recognition of the optometrist as a diagnostician of the diseases of the eye is an infringement on medical practice laws and should not be sanctioned by any state or institution; that referring patients to opticians should be deprecated; that the House of Delegates be requested to

publish a history of so-called optometry and optometry colleges and to send copies to officials of state medical societies and to other medical men who are; and that a committee of two members of the Section on Ophthalmology be appointed to furnish the necessary data.

The resolutions of the two committees as given above were passed and sent to the House of Delegates for action. [The approval of that body is noted in THE JOURNAL, June 18, p. 2076.]

WEDNESDAY, JUNE 8—MORNING

Dr. Mark D. Stevenson, Akron, O., exhibited an instrument for elevating and holding the upper lid in the treatment of ophthalmia neonatorum, or other trouble, to facilitate the application of medicaments to the upper cul-de-sac. Dr. Stevenson also showed a Goodrich No. 7 shut-off, to be used on an irrigator.

Dr. A. Greenwood, Boston, presented an appliance for shutting out surrounding light in examining the interior of the eye with the ophthalmoscope.

Dr. C. H. Williams, Boston, exhibited some correctly colored worsteds for performing the Holmgren color test of the eyes, and explained his method of keeping a record of the examinations of patients for color-blindness.

Dr. G. C. Savage, Nashville, exhibited his muscle indicator and explained how it might be used in the light tests.

Dr. Lucien Howe, Buffalo, Chairman of the Committee on Collective Investigation Concerning the Ocular Muscles, read the report of that committee.

On motion of Dr. J. E. Weeks, New York, the report was accepted and the committee continued. The report was discussed by Dr. Weeks, Dr. Savage and Dr. Howe.

The report of the Committee on Tuberculosis was read by the Chairman, Dr. W. H. Wilder, Chicago. On motion of Dr. Mark D. Stevenson, Akron, O., the report was adopted and the committee ordered continued. The report was discussed by Dr. John Green, St. Louis.

Dr. Edward Jackson, Denver, read a paper on "Tests of Visual Subjective Correction of Ametropia." Discussed by Dr. C. H. Williams, Boston; Dr. F. Park Lewis, Buffalo; Dr. W. H. Leudde, St. Louis, and Dr. E. Jackson, Denver.

On motion of Dr. A. E. Bulson, Jr., Fort Wayne, Ind., the delegate from the Section was directed to present the name of Mr. J. Herbert Parsons, London, the guest of the Section, to the House of Delegates for election as an honorary member of the Association.

Drs. Mark D. Stevenson, Akron, and E. M. Weaver, Akron, O., presented a paper on "Prescribing of Lenses For Close Work." Discussed by Drs. A. G. Bennett, Buffalo; A. E. Bulson, Jr., Fort Wayne, Ind.; A. Greenwood, Boston; S. L. Ledbetter, Birmingham, Ala.; G. C. Savage, Nashville; Joseph S. Lichtenberg, Kansas City, and Mark D. Stevenson, Akron, O.

Dr. F. Park Lewis, Buffalo, N. Y., read a paper on "Prevention of Blindness." Discussed by Drs. A. E. Bulson, Jr., Fort Wayne, Ind.; Lucien Howe, Buffalo, N. Y.; A. Greenwood, Boston; John Green, Jr., St. Louis; J. A. Donovan, Butte, Mont.; G. C. Savage, Nashville, Tenn.; Miss C. C. Van Blarcom, New York; Mr. Elliott, of the Russell Sage Foundation, New York, and Dr. Mark D. Stevenson, Akron, O.

Dr. F. Park Lewis, Buffalo, N. Y., offered the following resolution covering certain recommendations in Dr. Lewis' paper:

WHEREAS, The American Medical Association has at present a Committee on Ophthalmia Neonatorum, the purpose of which is the prevention of blindness from this disease, and

WHEREAS, Trachoma, industrial accidents, intermarriage of the blind, and wood alcohol amblyopia are also preventable causes of blindness; therefore, be it

Resolved, That the House of Delegates be requested to appoint a "Committee on the Prevention of Blindness," the membership of which shall consist of the Chairman of the Committee on Ophthalmia Neonatorum and such other members for the investigation of the above causes of blindness as the president may appoint. This Committee shall invite the cooperation of the American Ophthalmological Society and similar organizations.

[The approval of this resolution, with modifications, is noted in THE JOURNAL, June 18, page 2076.]

Dr. W. Zentmayer read a paper on "Present Status of the Etiology of Squint." Discussed by Drs. C. D. Wescott, Chicago; G. C. Savage, Nashville; L. Emerson, Orange, N. J., and Dr. W. Zentmayer.

WEDNESDAY, JUNE 8—AFTERNOON

Mr. J. Herbert Parsons, London, the guest of the Section, delivered his address on "The Effect of Bright Light on the Eyes." No discussion.

Dr. A. E. Davis, New York, read a paper on "Post-Operative Treatment of Strabismus." Discussed by Drs. Nelson M. Black, Milwaukee, Wis.; W. Reber, Philadelphia; G. C. Savage, Nashville, Tenn.; Lucien Howe, Buffalo, N. Y.; W. Zentmayer, Philadelphia, and A. E. Davis, New York.

Dr. V. H. Hulen, Houston, Tex., read a paper on "Advancement Operation in Squint." Discussed by H. H. Briggs, Asheville, N. C.; G. C. Savage, Nashville, Tenn.; F. C. Todd, Minneapolis; Mark D. Stevenson, Akron, O.; John Green, St. Louis, E. C. Ellett, Memphis, Tenn.; V. H. Hulen, Houston, Tex.

Dr. Casey Wood, Chicago, read a paper on "Surgical Treatment of Separation of the Retina." Discussed by Drs. L. Webster Fox, Philadelphia; Oscar Dodd, Chicago; H. Gifford, Omaha, Neb.; S. L. Ziegler, Philadelphia; Hiram Woods, Baltimore; A. Greenwood, Boston, and Casey Wood, Chicago.

Dr. Albert E. Bulson, Jr., Fort Wayne, Ind., read a paper on "The Noguchi Serum Reaction for Syphilis as an Aid to Diagnosis in Eye Lesions." Discussed by Drs. E. V. L. Brown, Chicago, and A. E. Bulson, Jr., Fort Wayne, Ind.

THURSDAY, JUNE 9—MORNING

Dr. H. Hill, Benton Harbor, Mich., exhibited an addition to the trial frame for measuring the near reading focus.

Dr. W. Reber, Philadelphia, presented a circular, concave glass shield on a handle made to fit over the cornea to prevent loss of vitreous in cataract operations. He also presented a pair of magnifying lenses in a spectacle frame with hooks to be attached over the glasses of the operator in doing needling or other operations on the eye. Dr. Allen Greenwood, of Boston, stated that he had devised and had been using the same appliance for twelve years.

Dr. Nelson Black, Milwaukee, presented an appliance to be used on the trial frame when using the red glass to aid in determining diplopia, so that the patient cannot look above, below or to the right or left, but must look through the red glass. It is simply an enlargement of the red glass that fits up against the patient's nose closely.

Dr. C. H. Williams, Boston, presented an apparatus and method for making enlarged prints of microscopic specimens, which gave a sharpness of definition which could not be obtained in the ordinary way.

Dr. H. Gradle, Chicago, showed his modification of the Schietz tonometer.

Dr. H. Gifford, Omaha, Neb., read a paper on "Danger of Sympathetic Ophthalmia From the Use of the Cautery in Treating Iris-Prolapse; with Discussion of Other Methods of Treatment. Discussed by Drs. R. H. T. Mann, Texarkana; J. A. Donovan, Butte, Mont.; Edward Jackson, Denver, and Gifford, Omaha, Neb.

Dr. W. R. Parker, Detroit, read a paper on "Ophthalmia Nodosa, or Caterpillar-Hair Ophthalmia, with Report of a Case." No discussion.

Dr. E. C. Ellett, Memphis, Tenn., read a paper on "Spontaneous Rupture of the Eyeball—A Phenomenon of Glaucoma." Discussed by Drs. J. M. Ray, Louisville, Ky.; S. L. Ledbetter, Birmingham, Ala.; R. H. T. Mann, Texarkana, and E. C. Ellett, Memphis, Tenn.

Dr. Hiram Woods, Baltimore, read a paper on "Auto-intoxication and Allied Intestinal Troubles as a Possible Cause of Certain Vascular and Functional Disturbances." Discussed by Drs. J. F. Shoemaker, St. Louis; Judson Daland, Philadelphia; J. L. Thompson, Indianapolis; L. Connor, Detroit; A. G. Bennett, Buffalo, N. Y.; R. D. Gibson, Youngstown, O.; S. L. Ziegler, Philadelphia, and H. Woods, Baltimore.

Dr. J. E. Weeks, New York, read a paper on "Status of Serum and Vaccine Therapy in Ophthalmology." Discussed by Drs. M. Wiener, St. Louis; H. Gradle, Chicago; H. Gifford, Omaha, Neb.; A. G. Bennett, Buffalo, N. Y.; E. V. L. Brown, Chicago, and J. E. Weeks, New York.

Dr. Wendell Reber, Philadelphia, read a paper on "The Ocular Palsies Associated with the Introduction of Various Solutions into the Spinal Cord for the Induction of Surgical Anesthesia." Discussed by Drs. John Green, Jr., St. Louis; W. W. Graves, St. Louis; Prof. Alfred Saenger, Hamburg, Germany; James Bordley, Baltimore; G. C. Savage, Nashville, Tenn.; and W. Reber, Philadelphia.

Prof. Alfred Saenger, of Hamburg, Germany, the guest of the Section on Nervous and Mental Diseases, was invited to address the Section on Ophthalmology and spoke on the Wilbrandt method of differentiating cortical from basal hemianopsia.

THURSDAY, JUNE 9—AFTERNOON

The Executive Committee submitted its report as follows:

Your Committee submit the following recommendations as their report:

First, we recommend that the officers shall so construct the program for next year that the reading and discussion of papers shall

continue until noon of Friday, the fourth day, and that clinical demonstrations, if any, shall be given on Friday afternoon.

As to officers of the Section for another year, we recommend A. E. Bulson, Jr., Fort Wayne, for Chairman, as a fitting recognition of his long and faithful services as Secretary, in which office he has grown bald if not gray.

We recommend the "Chesterfield" of Southern Ophthalmology, E. C. Ellett, of Memphis, for Vice-Chairman.

We recommend the vigorous, promising young ophthalmologist, Edgar S. Thompson, of New York City, for Secretary.

Finally, we recommend that John C. Bossidy, of Boston, be made our representative in the House of Delegates.

G. C. SAVAGE,
W. H. WILDER,
LEWIS H. TAYLOR.

Dr. L. Webster Fox, Philadelphia, offered the following resolution, which, on motion, was adopted and ordered transmitted to Governor Crothers of Maryland and Governor Harmon of Ohio:

Resolved, That the thanks of the Section on Ophthalmology of the American Medical Association be extended to Governor Crothers of Maryland, and Governor Harmon of Ohio, for their action in vetoing bills legalizing the practice of so-called optometry.

Dr. A. E. Bulson, Jr., Fort Wayne, Ind., moved that the Chairman appoint a committee of three to represent this Section before the Board of Trustees to discuss the action which prevented the Section on Ophthalmology from having an exhibit and demonstration at the meeting-place of the Section, and to make some satisfactory arrangement with the Board of Trustees for such scientific exhibit and demonstration in the future. Carried. The Chairman appointed on that committee Drs. Albert E. Bulson, Jr., Fort Wayne, Ind.; Casey Wood, Chicago, and Edward Jackson, Denver.

Dr. A. E. Bulson, Jr., Fort Wayne, Ind., brought up the question of the establishment by the Section of a fund to be known as the Herman Knapp Testimonal Fund, said fund to be used for the following purposes, or for such purposes as might be agreed on by the Section or the committee provided for the purpose of taking charge of the fund:

1. A Knapp Medal to uninvited contributors for original work in ophthalmology or a summary of the literature, or some contribution of such a highly meritorious character in the field of ophthalmology as would warrant the granting of a medal.
2. A prize or medal to be given to those who are invited to contribute on some special topic or work.
3. A portion of the fund to be used to meet the expenses of the scientific exhibit and various practical demonstrations.
4. A portion of the fund to make provision for incidental expenses of the Section.
5. A portion to make provision for the expenses of committees carrying on scientific work, as, for instance, the Committee on Tuberculous Diseases of the Eye, etc.
6. A portion to make provision for the contingent expenses of the Section not met by the Association, as expenses for postage, etc., now paid by the Secretary.
7. A portion to make provision for the local expenses of invited guests or guests of honor of the Section.
8. A committee of five to be appointed to carry out the above purposes of securing a fund in accordance with a circular already sent to the members, on which the sum of about $400 had been collected, and to have charge of and administer the fund, one member of said committee to be appointed for one year, another for two years and another for three years, thus changing the membership of the board each year.

Dr. G. C. Savage, Nashville, Tenn., made a motion, which was seconded and carried, that the Section on Ophthalmology approve of the plans and purposes of the Herman Knapp Testimonial Fund as outlined by Dr. Bulson.

Dr. John E. Weeks, New York, moved that the committee consist of the Chairman and Secretary of this Section and the Executive Committee of the Section. Seconded and carried.

REPORT OF THE COMMITTEE ON THE SMITH OPERATION FOR CATARACT

The Committee on the Smith Operation for Cataract submitted a report as follows:

The committee appointed by this Section at Atlantic City last year, to report on the merits of the Smith operation as applied to American patients, begs leave to report progress and asks for more time. The time since its circular was issued has been too short to gather enough cases to do justice to the operation. If this committee is continued it will insist that all operations reported to it shall be made according to the general plan laid down by Colonel Smith, and with his instruments, as recorded in the *Ophthalmic Record*, February, 1910. We feel that a record of 25,000 operations has given him the right to say just how a Smith operation shall be performed.

D. W. GREEN,
ARNOLD KNAPP,
EDWARD JACKSON,
CASEY WOOD,
WALTER R. PARKER, Secretary.

On motion of Dr. L. Webster Fox the report was received and the committee continued.

Dr. G. C. Savage, Nashville, Tenn., read a paper on "Cataract-in-Capsule Extraction by a New Means and a New Method."

Dr. J. L. Thompson, Indianapolis, read a paper on "My Experience in the Operation for Cataract."

These two papers were discussed by Drs. T. H. Wood, Nashville, Tenn.; A. E. Bulson, Jr., Fort Wayne, Ind.; D. W. Green, Dayton, Ohio; L. Webster Fox, Philadelphia; J. L. Thompson, Indianapolis, and G. C. Savage, Nashville, Tenn.

Dr. Allen Greenwood, Boston, read a paper on "Filtering Cicatrix for Chronic Glaucoma, with Report of Cases Operated on by the Method of LaGrange." Discussed by Drs. J. E. Weeks, New York; H. Gifford, Omaha, Neb., and A. Greenwood, Boston.

Dr. G. C. Savage, Nashville, explained that Dr. F. P. Calhoun, Atlanta, on account of the illness of his father, a member of the Association, could not be present to read his paper on "Plastic Surgery of the Eyelids, Using the Wolfe Graft," and moved that the paper be postponed and put on the program for next year. Carried.

Dr. S. L. Ziegler, Philadelphia, moved that a message of condolence be sent from the Section to Dr. Calhoun on the illness of his father. The Secretary was so instructed.

SECTION ON LARYNGOLOGY AND OTOLOGY

TUESDAY, JUNE 7—AFTERNOON

The Chairman, Dr. Chevalier Jackson, Pittsburg, called the meeting to order at 2:30 p. m., in Sodality Hall.

Dr. Jackson delivered the Chairman's Address, entitled, "Esophageal Stricture Following the Swallowing of Caustic Alkalies."

Dr. E. Fletcher Ingals, Chicago, made a motion, which was passed, that the subject be referred to the Committee on Pharmacy with the request that they do what may be necessary to secure the proper labeling of these dangerous substances.

Dr. Holger Mygind, Copenhagen, Denmark, the foreign guest of the Section, delivered an address, "In Memoriam: Wilhelm Meyer."

Dr. Dunbar Roy, Atlanta, Ga., read a paper entitled "Clinical Observations on Nasal Diphtheria." Discussed by Drs. W. E. Casselberry, Chicago; B. R. Shurly, Detroit; Max Goldstein, St. Louis; J. A. Stucky, Lexington, Ky.; Henry Horn, San Francisco; G. L. Cott, Buffalo; Fletcher Ingals, Chicago; Otto Glogau, New York; C. M. Miller, Richmond; and Dr. Dunbar Roy, Atlanta, Ga.

Dr. Ross Hall Skillern, Philadelphia, read a paper on "The Comparative Pathology of Hyperplastic and Suppurative Ethmoiditis," with lantern-slide demonstration. Discussed by Drs. W. L. Ballinger, Chicago; W. E. Casselberry, Chicago; G. P. Marquis, Chicago; O. T. Freer, Chicago; W. L. Ballinger, Chicago; and R. H. Skillern, Philadelphia.

WEDNESDAY, JUNE 8—MORNING

Dr. Henry Horn, San Francisco, read a paper on "The Bronchoscopic Treatment of Bronchial Asthma." Discussed by Drs. E. Fletcher Ingals, Chicago; Chevalier Jackson, Pittsburg; W. E. Casselberry, Chicago; W. S. Anderson, Detroit; and Henry Horn, San Francisco.

Dr. Justus Matthews, Rochester, Minn., read a paper on "Observations on the Vocal Cords in One Thousand Cases of Goiter." Discussed by Drs. W. E. Casselberry, Chicago; G. F. Cott, Buffalo; Henry Horn, San Francisco; G. P. Marquis, Chicago; and Justus Matthews, Rochester, Minn.

The following three papers were read and discussed as a Symposium on Faucial Tonsils:

Dr. Robert Levy, Denver, "The Tuberculous Tonsil."

Dr. Joseph C. Beck, Chicago, "Conditions Demanding Enucleation of Faucial Tonsils."

Dr. Burt R. Shurly, Detroit, "The Difficulties Associated with the Operation for Enucleation of the Faucial Tonsils, and Contraindications for This Procedure."

These three papers were discussed by Drs. A. H. Andrews, Chicago; W. E. Sauer, St. Louis; W. F. Welty, San Francisco; J. E. Logan, Kansas City; O. T. Freer, Chicago; F. E. Auten, Belleville, Ill.; Max Goldstein, St. Louis; B. D. Sheedy, New York; Henry Horn, San Francisco; and J. C. Beck, Chicago.

WEDNESDAY, JUNE 8—AFTERNOON

Dr. Burt R. Shurly offered a resolution that a committee be appointed by the chair to draw up resolutions in memoriam of Drs. Stubbs and King, which was adopted, and the chair appointed Drs. Shurly, Pierce and Goldstein as such committee.

The following three papers were read and discussed as a Symposium on Otitic Meningitis:

Dr. E. B. Dench, New York, "Symptomatology and Diagnosis of Meningitis of Otitic Origin."

Dr. S. MacCuen Smith, Philadelphia, "Indications for Surgical Interference for the Relief of Otitic Meningitis."

Prof. Holger Mygind, Copenhagen, Denmark, "The Surgical Treatment of Otitic Meningitis."

These three papers were discussed by Drs. Norval H. Pierce, Chicago; J. A. Stucky, Lexington, Ky.; W. F. Welty, San Francisco; C. M. Brown, Buffalo; Scholtz, St. Louis; Otto Glogau, New York; E. P. Dench, New York; S. M. Smith, Philadelphia; and Holger Mygind, Copenhagen, Denmark.

On motion of Dr. MacCuen Smith, the delegate from the Section was instructed to recommend to the House of Delegates that Prof. Holger Mygind, Copenhagen, Denmark, be made an honorary member of the Association.

Dr. F. P. Emerson, Boston, read a paper on "The Results of the Operation of Submucous Resection of the Septum in Private Practice."

Dr. Clyde E. Purcell, Paducah, Ky., read a paper on "Submucous Resection of the Nasal Septum."

These two papers were discussed by Drs. J. O. Roe, Rochester, N. Y.; O. T. Freer, Chicago; Scholtz, St. Louis; B. D. Sheedy, New York; W. L. Ballinger, Chicago; O. Tydings, Chicago; G. Shuler, St. Louis; James Steffens, Chicago; L. P. Emerson, Boston; and C. E. Purcell, Paducah, Ky.

THURSDAY, JUNE 9—MORNING

The Vice-Chairman, Dr. George F. Cott, Buffalo, presiding, the election of officers took place.

The report of the Executive Committee, Dr. S. MacCuen Smith, Philadelphia, Chairman, recommended the following as officers for the ensuing year: Chairman, Dr. Dunbar Roy, Atlanta, Ga.; Vice-Chairman, Dr. W. E. Sauer, St. Louis; Secretary, Dr. George E. Shambaugh, Chicago; Delegate, H. W. Loeb, St. Louis.

On motion, duly seconded, the report of the Executive Committee was accepted and the Chairman instructed to cast the ballot for the nominees.

Dr. S. MacCuen Smith, on behalf of the Executive Committee, made a motion, which was seconded and adopted, that in the future the senior member of that Committee be recommended to the Section for the next member of the House of Delegates.

An Exhibition of Patients, Instruments and Specimens was then held.

Dr. Greenfield Sluder, St. Louis, demonstrated a method of removing tonsils, in their capsule, with a modified MacKenzie tonsillotome, and exhibited a number of tonsils so removed, and patients who had been operated on by this method, showing the after-results.

Dr. C. A. Leavy, St. Louis, exhibited a case of laryngeal stenosis.

Dr. Max Goldstein, St. Louis, showed a case of angioma cavernosa of the uvula, and described the method of its removal. He also showed an interesting case of paralysis of the vocal cords.

Dr. W. E. Sauer, St. Louis, exhibited a case of osteoma of the nasal process of the maxillary bone; and, a case of thrombosis of the lateral sinus, which had occurred without involvement of the middle ear.

Dr. Mark D. Stevenson, Akron, Ohio, exhibited a new eardrain made of cotton covered with gauze, of round form, which could be cut into convenient lengths, and used by the patient, who could change it at frequent intervals.

Dr. H. W. Loeb, St. Louis, showed a case in which laryngectomy had been done six years previously for epithelioma of the larynx; the patient, a working man, bricklayer, had been able to continue his work ever since very satisfactorily. At home he could express himself so as to be understood by his family.

Dr. Max Goldstein, St. Louis, showed a patient, a young girl of 17, who had been totally deaf for five years and who in two months of systematic teaching had acquired a knowledge of lip reading by which she could communicate with others. Discussed by Prof. Holger Mygind, Copenhagen, Denmark.

Dr. Otto Glogau, New York, exhibited a submucous septum saw, for removing the deviated bony portion of the deflected septum.

Dr. Henry Horn, San Francisco, exhibited an instrument or apparatus for determining the presence of pus in the accessory cavities by means of negative pressure.

Dr. J. D. Heitger, Kalamazoo, Mich., exhibited a device for warming the laryngeal mirror by means of an attachment to the ordinary electric socket.

J. W. Radu, Tonawanda, N. Y., showed an improvement on the diagnostic lamps to be used with battery or street currents, which produced a perfectly white light instead of a yellow one, and gave no heat. This closed the exhibition.

Dr. Sydney Lange, Cincinnati, read a paper on "The Pathology of Mastoiditis as Revealed by the X-ray. Discussed by Drs. Henry Horn, San Francisco; C. F. Welty, San Francisco; Frank E. Auten, Belleville, Ill.; and S. Lange, Cincinnati.

Dr. Frank C. Todd, Minneapolis, read a paper on "Neuralgias and Functional Disturbances Occurring in the Head and Neck Arising from Infections in and About the Tonsils." Discussed by Drs. Lafayette Page, Indianapolis; Frank E. Auten, Belleville, Ill.; MacLaren, Oklahoma; C. F. Welty, San Francisco; H. B. Lemere, Omaha, Neb.; George F. Cott, Buffalo; and Frank C. Todd, Minneapolis.

Dr. George W. Boot, Evanston, Ill., read a paper on "The Development of the Human Temporal Bone." Discussed by Dr. George E. Shambaugh, Chicago.

Dr. Will Walter, Chicago, read a paper on "A Study of the Bacterial Flora of the Nasal Mucosa." Discussed by Drs. E. R. Lewis, Dubuque, Iowa; W. S. Anderson, Detroit; and W. Walter, Chicago.

Dr. Henry Horn, San Francisco, demonstrated preparations showing (a) "Cholesteatoma of Middle Ear with Defect in the Horizontal Semicircular Canal and Infection of the Labyrinth"; (b) "Cholesteatoma of Middle Ear with Defect in Horizontal Canal Without Infection of the Labyrinth." Discussed by Dr. George E. Shambaugh, Chicago.

THURSDAY, JUNE 9—AFTERNOON

The Vice-Chairman, Dr. George Scott, Buffalo, N. Y., presided.

The committee appointed to draw up resolutions in memoriam of Drs. Stubbs and King asked for further time in which to gather biographic data, and asked to be empowered to submit one copy of report to the Secretary to be spread on the minutes, and a copy to be sent to the respective families. On motion of Dr. J. J. Kyle, the request of the committee was granted.

The following papers were read and discussed as a Symposium on Labyrinthine Suppuration:

The paper of Dr. Jaques Holinger, Chicago, on "The Pathology and Prognosis of Internal Ear Complications Resulting from Inflammatory Middle Ear Diseases," was read by Dr. B. R. Shurly, Detroit, Dr. Holinger being absent because of illness.

Dr. L. K. Guggenheim, St. Louis, gave a lantern-slide demonstration of specimens, showing the pathology of internal ear disease.

Dr. J. R. Fletcher, Chicago, read a paper on "The Symptoms and Diagnosis of Infections of the Labyrinth Resulting from Chronic Suppurative Otitis Media."

Dr. George E. Davis, New York, read a paper on "The Present Status of Vertigo Considered from a Diagnostic Standpoint."

The three papers, with the lantern-slide demonstration, were discussed by Drs. A. B. Duel, New York; Prof. Holger Mygind, Copenhagen, Denmark; George F. Cott, Buffalo; C. F. Welty, San Francisco; George E. Shambaugh, Chicago; Robert Barclay, St. Louis; C. M. Brown, Buffalo; L. K. Guggenheim, St. Louis; Henry Horn, San Francisco; Otto Glogau, New York; J. R. Fletcher, Chicago; and G. E. Davis, New York.

SECTION ON NERVOUS AND MENTAL DISEASES

TUESDAY, JUNE 7—MORNING

The meeting was called to order at 2 p. m., in the St. Louis University Library, by the Chairman, Dr. Theodore Diller, Pittsburg, who then read his address.

A committee, consisting of Dr. Collins and Dr. Langdon, was appointed to prepare resolutions regarding the death of Dr. Wharton Sinkler.

Dr. Alfred Saenger, of Hamburg, Germany, was, on motion, recommended for honorary membership. [The House of Delegates approved.]

A resolution deprecating the custom of printing details of suicides in the secular press on account of the harmful, suggestive effect on certain individuals, and requesting the Legislative Committee to be instructed to secure, if possible, the enactment of a national law forbidding the use of the mails to

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newspapers publishing such details, and making it a misdemeanor to publish them, was referred to the Executive Committee.

Dr. Joseph Collins, New York, read a paper on "The Urgent Need of Hospitals for the Study and Treatment of Nervous Diseases."

Dr. L. Vernon Briggs, Boston, read a paper on "Prevention of Insanity by the Treatment of Incipient Cases in General Hospitals."

Dr. Irwin H. Neff, Foxboro, Mass., read a paper on "The State Care of the Inebriate."

These three papers were discussed by Drs. Alfred Saenger, Hamburg, Germany; Charles L. Dana, New York; T. D. Crothers, Hartford, Conn.; F. P. Norbury, Kankakee, Ill.; A. E. Sterne, Indianapolis; Frank R. Fry, St. Louis; Philip Zenner, Cincinnati; Hugh T. Patrick, Chicago; Theodore Diller, Pittsburg; Haldor Sneve, St. Paul, Minn.; Herman H. Hoppe, Cincinnati; Joseph Collins, New York; L. Vernon Briggs, New York; and Irwin H. Neff, Foxboro, Mass.

The Chairman appointed as an Executive Committee, and also as a Committee on Nomination of Officers: Drs. Charles L. Dana, New York; H. T. Patrick, Chicago; and F. W. Langdon, Cincinnati.

Dr. Herbert J. Hall, Marblehead, Mass., read a paper on "Manual Work in the Treatment of the Functional Nervous Diseases."

Dr. Haldor Sneve, St. Paul, Minn., read a paper on "The Treatment of Nervous Diseases by Gymnastic and Massage."

These two papers were discussed by Drs. C. R. Woodson, St. Joseph, Mo.; John Punton, Kansas City, Mo.; Frank R. Fry, St. Louis; Philip Zenner, Cincinnati; C. P. Emerson, Clifton Springs, N. Y.; L. H. Mettler, Chicago; Theodore Diller, Pittsburg, Pa.; Herbert J. Hall, Marblehead, Mass.; and Haldor Sneve, St. Paul, Minn.

WEDNESDAY, JUNE 8—MORNING

Dr. H. E. Robertson, Minneapolis, read a paper on "Pathology of Anterior Poliomyelitis."

Dr. David Silver, Pittsburg, Pa., read a paper on "The Surgical Treatment of Anterior Poliomyelitis."

These two papers were discussed by Drs. Archibald Church, Chicago; L. H. Mettler, Chicago; P. Bassoe, Chicago; A. L. Skoog, Kansas City; Arthur S. Hamilton, Minneapolis; Nathaniel Allison, St. Louis; Frank R. Fry, St. Louis; C. R. Woodson, St. Joseph, Mo.; C. H. Hughes, St. Louis; H. E. Robertson, Minneapolis; and David Silver, Pittsburg.

WEDNESDAY, JUNE 8—AFTERNOON

Dr. Herman H. Hoppe, Cincinnati, read a paper on "The Topographical Diagnosis of Subtentorial Tumors."

Dr. Frank Warren Langdon and Simon P. Kramer, Cincinnati, presented a paper on "Brain Tumor of the Psychomotor Area."

Dr. Julius Grinker, Chicago, read a paper on "Tumor of the Cerebello-Pontile Angle."

These three papers were discussed by Drs. C. H. Hughes, St. Louis; George W. Hall, Chicago; A. E. Sterne, Indianapolis; Charles L. Dana, New York; Theodore Diller, Pittsburg, Pa.; D'Orsay Hecht, Chicago; H. H. Hoppe, Cincinnati; and Julius Grinker, Chicago.

Drs. Edward E. Mayer and Otto C. Gaub, Pittsburg, Pa., presented a paper on "Intradural Tumor of Lower Cervical Cord with Operation."

Discussed by Drs. Theodore Diller, Pittsburg, Pa.; Julius Grinker, Chicago; Charles L. Dana, New York; and Edward E. Mayer, Pittsburg, Pa.

Dr. Archibald Church, Chicago, read a paper on "Nervous and Mental Disturbance at the Male Climacteric." No discussion.

Dr. Charles L. Dana, New York, read a paper on "Study and Interpretation of Pains and Dysthesias." Discussed by Drs. Frank R. Fry, St. Louis; John Punton, Kansas City, Mo.; Sanger Brown, Chicago; L. H. Mettler, Chicago; Julius Grinker, Chicago; C. A. Wingerter, Wheeling, W. Va.; William W. Graves, St. Louis; Theodore Diller, Pittsburg; Charles L. Dana, New York.

A resolution was adopted by rising vote in memory of the late Wharton Sinkler.

Dr. E. M. Hummel, New Orleans, read a paper on "Syphilitic Disease of Arteries of the Central Nervous System, with Detailed Report of a Case." Discussed by Drs. William W. Graves, St. Louis; George A. Moleen, Denver; Sanger Brown, Chicago; Theodore Diller, Pittsburg, and E. M. Hummel, New York.

Dr. A. L. Skoog, Kansas City, Mo., read a paper on "Amyotonia Congenita." Discussed by Dr. Theodore Diller, Pittsburg, Pa.

Dr. E. Bosworth McCready, Pittsburg, Pa., read a paper on "The Relation of Stuttering to Amusia." No discussion.

THURSDAY, JUNE 9—MORNING

The following officers of the Section for 1911 were elected: Chairman, W. A. Jones, Minneapolis; Vice-Chairman, Herman H. Hoppe, Cincinnati; Secretary, E. E. Southard, Boston; Delegate, Theodore Diller, Pittsburg, Pa.; Alternate, J. H. McBride, Pasadena, Cal.

The resolution deprecating the custom of printing details of suicides was adopted as the sense of the Section, and this action was ordered referred to the House of Delegates of the American Medical Association for action. [See next page, first column; see also THE JOURNAL, June 18, 1910, page 2076.]

Dr. Alfred Saenger, Hamburg, Germany, read an address on "Choked Disc in Its Relation to Cerebral Tumor and Trepanning." Discussed by Drs. J. Herbert Parsons, London; Julius Grinker, Chicago; J. Bordley, Jr., Baltimore; N. M. Black, Milwaukee, Wis., and Alfred Saenger, Hamburg, Germany.

Dr. Alfred Saenger, Hamburg, Germany, illustrated and discussed Wilbrand's prism test.

Dr. W. W. Graves presented two cases, one of brain tumor and another of a condition of hemianopsia, etc., resulting from skull fracture. Discussed by Dr. Alfred Saenger, Hamburg, Germany.

Dr. John Punton, Kansas City, Mo., read a paper on "The Plea of Insanity as a Defense for Crime and Its Remedy." Discussed by Drs. Louise G. Robinovitch, New York; David S. Booth, St. Louis; A. E. Sterne, Indianapolis; George A. Moleen, Denver; C. W. Thierny, St. Louis; L. V. Briggs, Boston; C. A. Wingerter, Wheeling, W. Va.; C. R. Woodson, St. Joseph, Mo.; Edward Bow, Jacksonville, Ill.; John Punton, Kansas City, Mo.; S. G. Burnett, Kansas City, Mo., and Sanger Brown, Chicago.

Drs. W. A. Jones and Arthur S. Hamilton, Minneapolis, presented a paper on "Hemiplegia Following Acute Infections." Discussed by Drs. M. M. Perry, Parsons, Kan.; Sanger Brown, Chicago; L. H. Mettler, Chicago, and W. A. Jones, Minneapolis.

Dr. George E. Pettey, Memphis, Tenn., read a paper on "The Treatment of Acute Ailments Occurring in Persons Addicted to Narcotic Drugs." No discussion.

Dr. George Edward Fell, Buffalo, N. Y., read a paper on "Twenty Years of Electrocution." No discussion.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

TUESDAY, JUNE 7—AFTERNOON

The Section was called to order at 2 p. m., in Association Hall, by the Chairman, Dr. J. N. Hurty, Indianapolis.

The Chairman read his address on "The Bookkeeping of Humanity." On motion of Dr. P. M. Townsend, Marshalltown, Iowa, duly seconded, the paper was referred to a committee of three, appointed by the Secretary, Dr. Marshall L. Price, Baltimore (temporarily acting as chairman), as follows: Dr. W. R. Batt, Harrisburg, Pa.; Dr. C. H. Jones, Baltimore, and Dr. P. M. Townsend, Marshalltown, Iowa. Discussed by Drs. Prince A. Morrow, New York; W. F. Snow, Sacramento, Cal.; Arthur Reynolds, Chicago; P. M. Townsend, Marshalltown, Iowa; Henry B. Hemenway, Evanston, Ill., and J. N. Hurty, Indianapolis.

Dr. Walter P. Bierring, Iowa City, Iowa, read a paper on "The Rôle of Pathology and Physiology in Preventive Medicine."

Dr. Joseph P. Remington, Philadelphia, read a paper on "The Rôle of Pharmacy in Preventive Medicine."

These two papers were discussed by Drs. Seneca Egbert, Philadelphia, and William Le Roy Dunn, Asheville, N. C.; W. A. Evans, Chicago; Liston H. Montgomery, Chicago; J. N. Hurty, Indianapolis; George Edward Fell, Buffalo, N. Y.; Walter P. Bierring, Iowa City, Iowa, and Joseph P. Remington, Philadelphia.

Dr. G. Lloyd Magruder, Washington, D. C., read a paper entitled "Further Observations on the Milk Supply of Washington, D. C.," with illustrative lantern slides. Discussed by Drs. William C. M. Woodward, Washington, D. C.; William H. Welch, Baltimore; B. Franklin Royer, Harrisburg, Pa., Will-

iam Edward Grant, Louisville, Ky.; Seneca Egbert, Philadelphia. A vote of thanks to the author of the paper, Dr. Magruder, was moved by Dr. W. Forrest Dutton, Carnegie, Pa., and given.

The Secretary, on behalf of the officers of the Section, then nominated for associate membership in the American Medical Association John M. Glenn of New York, director of the Russell Sage Foundation. The report was adopted, and the nomination referred to the House of Delegates.

WEDNESDAY, JUNE 8—MORNING

Dr. Henry B. Hemenway, Evanston, Ill., offered the following resolution:

According to the published reports of the Census Bureau there has been a great and marked increase in the number of suicides in this country. The death-rate from this cause per hundred thousand was as follows: 1902, 12.7; 1903, 13.9; 1904, 14.8; 1905, 16.1; 1906, 14.3; 1907, 16.2; 1908, 18.5. An increase of practically 50 per cent. in the seven years demands investigation and energetic action. The publication in the secular papers of these unfortunate occurrences can do no one good; on the other hand, it is well recognized by those in a position to judge that such publication has a powerful suggestive effect on susceptible individuals, and it is unquestionably one of the most active causes of this form of death; therefore, be it

Resolved, That such publication of accounts of suicides is detrimental to the good of the people in this country, and that we request the House of Delegates to take action in the case by requesting the press of the land to stop such publication; and, further, that the Legislative Committee be instructed to further the enactment of a national law forbidding the use of the mails by any paper making such publication; and, further, that the same committee be instructed to assist in the passage of state laws making such publication a misdemeanor and providing suitable punishment therefor.

This resolution was approved by the Section for submission to the House of Delegates. [The House adopted a substitute of similar import. THE JOURNAL, June 18, page 2076.]

The Chairman appointed as a Committee on Nominations Drs. W. Forrest Dutton, Carnegie, Pa.; T. R. Crowder, Chicago, and J. E. King, Richmond, Ind.

Dr. Wilmer R. Batt, Harrisburg, Pa., on behalf of the committee to which the Chairman's address was referred, recommended its early publication and wide distribution.

The Chairman explained that he had not, in the session of June 7, 1910, given Dr. G. Lloyd Magruder opportunity to make the final statement in regard to the latter's paper, "Further Observations on the Milk-Supply of Washington, D. C.; Dr. Magruder then spoke.

Dr. Seneca Egbert, Philadelphia, read the Oration on State Medicine and Hygiene. Discussed by Drs. Henry B. Hemenway, Evanston, Ill.; W. A. Evans, Chicago; Rosalie Slaughter Morton, New York; Arthur Reynolds, Chicago; William C. Woodward, Washington, D. C.; John H. White, New Orleans; Mazyck P. Ravenel, Madison, Wis. Dr. Marshall Langton Price, Baltimore, moved a vote of thanks to Dr. Egbert, which was given.

Dr. Henry B. Hemenway, Evanston, Ill., offered the following resolution:

WHEREAS: Public health administration is greatly helped by popular education and cannot advance far beyond the state of common knowledge; and

WHEREAS: Our literary colleges and normal schools to-day give practically no instruction of this kind; and

WHEREAS: Much of the instruction in the graded schools of the land is based on misinformation; therefore be it

Resolved, That such instruction by lectures or otherwise should be given in every such institution of learning, and

Resolved, That the House of Delegates be asked to appoint a committee to promote a course of instruction in all literary colleges and normal schools.

This was adopted for submission to the House of Delegates [which referred it to the newly-formed Council on Health and Public Instruction. THE JOURNAL, June 18, page 2076.]

Dr. Joseph Collins, New York, read a paper on "The Epidemiology of Poliomyelitis and Cerebrospinal Meningitis." Discussed by J. N. Hurty, Indianapolis.

Dr. Hiram Woods, Baltimore, read a paper on "The Rôle of Ophthalmology in Preventive Medicine. Discussed by Drs. Leartus Connor, Detroit; Prince A. Morrow, New York; Seneca Egbert, Philadelphia; Henry B. Hemenway, Evanston, Ill.; W. Forrest Dutton, Carnegie, Pa.; and Hiram Woods, Baltimore.

Dr. Thomas S. Southworth, New York read a paper on "The Rôle of Pediatrics in Preventive Medicine." No discussion.

WEDNESDAY, JUNE 8—MORNING

The following papers were read and discussed as a symposium on Hookworm and Pellagra:

Dr. John D. Long, Washington, D. C.: "Pellagra," illustrated by lantern slides.

Dr. Charles W. Stiles, Washington, D. C.: "Sanitary Phases of the Hookworm Problem," illustrated by lantern slides.

Dr. Allen W. Freeman, Richmond, Va.: "Hookworm Disease: The Farm; the Next Point of Attack in Sanitary Progress."

These three papers were discussed by Drs. Marshall Langton Price, Baltimore; John L. Jelks, Memphis, Tenn.; C. C. Bass, New Orleans; James W. Babcock, Columbia, S. C.; William L. Medling, Nashville, Tenn.; Seneca Egbert, Philadelphia; John D. Long, Washington, D. C.; Charles W. Stiles, Washington, D. C.; J. N. Hurty, Indianapolis, Ind., and Allen W. Freeman, Richmond, Va.

Dr. W. Forrest Dutton, Carnegie, Pa., read a paper on "Present-Day Problems and Progress in Prevention of Typhoid Fever."

Dr. George Edward Fell, Buffalo, N. Y., read a paper on "The Currents at the Eastern End of Lake Erie and the Head of Niagara River: Their Influence on the Sanitation of the City of Buffalo, N. Y.," illustrated with lantern slides.

These two papers were discussed by Drs. H. W. Hill, Minneapolis; C. Hampson Jones, Baltimore; Liston H. Montgomery, Chicago; W. Forrest Dutton, Carnegie, Pa., and Seneca Egbert, Philadelphia.

Dr. I. D. Rawlings, Chicago, read a paper on "The Campaign Against Diphtheria and Scarlet Fever in Chicago."

Dr. C. Hampson Jones, Baltimore, read a paper on "What Can Health Departments Do to Control Scarlet Fever?"

These two papers were discussed by Drs. Henry B. Hemenway, Evanston, Ill.; B. Franklin Royer, Harrisburg, Pa.; H. W. Hill, Minneapolis; Seneca Egbert, Philadelphia; R. M. Winn, Hannibal, Mo.; G. Koehler, Chicago; H. Delamater, Kansas City, Mo.; I. D. Rawlings, Chicago, and C. Hampson Jones, Baltimore.

By motion duly made and carried, Papers 15 and 16 were made the first order of business for the ensuing meeting.

THURSDAY, JUNE 9—MORNING

Dr. T. D. Crothers, Hartford, Conn., read a paper on "The Relation of Alcoholism and Drug Addictions to Preventive Medicine." Discussed by Drs. Liston H. Montgomery, Chicago, and J. N. Hurty, Indianapolis.

Dr. W. Forrest Dutton, Carnegie, Pa., Chairman of Committee on Nominations, submitted the following nominations: Chairman, Dr. W. A. Evans, Chicago; Vice-Chairman, Dr. Marshall Langton Price, Baltimore; Secretary, Dr. C. Hampson Jones, Baltimore, Md.; Delegate, Dr. J. N. Hurty, Indianapolis; Alternate, Dr. J. H. White, New Orleans. The Secretary was instructed to cast the ballot for these nominees, and they were declared elected.

Dr. Arthur Reynolds moved the nomination of Dr. W. A. Evans, Chicago, as Orator on State Medicine and Hygiene, which was seconded, and Dr. Evans was elected, and made a stirring speech foreshadowing the creation of a Council on Public Health, whose function should largely be the coordination of work now done nation-wide in the interests of public health.

Dr. W. C. Gorgas, Ancon, Canal Zone, declared his sympathy with the Chairman-Elect's program for widening the scope of the Section.

Dr. Arthur Reynolds, Chicago, moved "That the Chairman of this Section be empowered to appoint such committees as in his judgment seem wise, to carry out the purposes he has outlined." Seconded and carried.

Dr. Miles F. Porter, Fort Wayne, Ind., read a paper on "The Rôle of Surgery in Preventive Medicine." Discussed by Drs. J. N. Hurty, Indianapolis; Seneca Egbert, Philadelphia; Liston H. Montgomery, Chicago; H. W. Hill, Minneapolis, and Walter P. Manton, Detroit.

Dr. Walter P. Manton, Detroit, read a paper on "The Rôle of Obstetrics in Preventive Medicine." Discussed by Drs. J. N. Hurty, Indianapolis; Henry B. Hemenway, Evanston, Ill.; P. M. Townsend, Marshalltown, Iowa; Charles W. Stiles, Washington, D. C.; C. Hampson Jones, Baltimore; Seneca Egbert, Philadelphia, and Walter P. Manton, Detroit.

Dr. J. J. Kyle, Indianapolis, read a paper on "The Rôle of Rhinology and Otology in Preventive Medicine." Discussed by Drs. Robert Levi, Denver; J. D. MacLaren, Norman, Okla.; H. W. Hill, Minneapolis; Liston H. Montgomery, Chicago; William H. Rush, St. Louis, and J. J. Kyle, Indianapolis.

Dr. Hibbert W. Hill, Minneapolis, read a paper on "Acute Epidemic Anterior Poliomyelitis." Discussed by Drs. J. M. Allen, Liberty, Mo.; Hibbert W. Hill, Minneapolis; W. Forrest Dutton, Carnegie, Pa.; Julius Lingenfelder, West Point, Neb., and Seneca Egbert, Philadelphia.

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Dr. W. H. Rennie, Washington, D. C., read a paper on "The Relation of Recruiting to Preventive Medicine." Discussed by Drs. Marshall Langton Price, Baltimore, and J. N. Hurty, Indianapolis.

Dr. Henry B. Hemenway, Evanston, Ill., read a paper on "Legal Aspects of Domestic Quarantine." Discussed by Drs. John H. White, New Orleans; B. Franklin Royer, Harrisburg, Pa.; W. A. Evans, Chicago; W. F. Snow, Sacramento, Cal., and Henry B. Hemenway, Evanston, Ill.

The Chairman, with assent of the Section, arranged to send a telegram of sympathy and regret to Dr. H. M. Bracken, Minneapolis, who was reported to be ill with typhoid fever.

THURSDAY, JUNE 9—AFTERNOON

Dr. Hyman Cohen, Chicago, read a paper on "House Quarantine." Discussed by Drs. B. Franklin Royer, Harrisburg, Pa.; Seneca Egbert, Philadelphia; I. D. Rawlings, Chicago, and Hyman Cohen, Chicago.

A paper by Dr. John H. White, New Orleans, on "The Permanent Elimination of Yellow Fever from the Earth," was read by Dr. Henry B. Hemenway, Evanston, Ill. No discussion.

Dr. Charles W. Stiles, Washington, D. C., exhibited two models of privies, describing details of construction and choice of color of paint to be applied, stating that flies were attracted by light colors, mosquitoes by dark colors; and further, that he had succeeded in placing privy construction on the manual training curricula of some schools. Discussed by Drs. J. N. Hurty, Indianapolis; Seneca Egbert, Philadelphia, and H. W. Hill, Minneapolis.

Dr. D. T. Quigley, North Platte, Neb., read a paper on "The Work of Prevention in Nebraska." Discussed by Dr. J. N. Hurty, Indianapolis.

Dr. W. A. Evans, Chicago, read a paper on "The Ventilation of School Buildings." Discussed by Drs. Henry B. Hemenway, Evanston, Ill.; Seneca Egbert, Philadelphia; J. N. Hurty, Indianapolis, and W. A. Evans, Chicago.

Dr. Gottfried Koehler, Chicago, read a paper by himself, and Dr. C. S. Clair Drake, Chicago, on "The Prevention of Infant Mortality." No discussion.

Dr. Fred O. Tonney, Chicago, read a paper on "Tuberculosis in the Raw Milk-Supply of Chicago." Discussed by Drs. W. A. Evans, Chicago, and Fred O. Tonney, Chicago.

Dr. B. L. Arms, Boston, read a paper on "The Strauss Reaction for the Diagnosis of Glanders." Discussed by Drs. H. W. Hill, Minneapolis, and B. L. Arms, Boston.

Installation of the officers-elect then followed, and the Section adjourned for 1910.

SECTION ON STOMATOLOGY

TUESDAY, JUNE 7—AFTERNOON

The meeting was called to order by the Chairman, Dr. Thomas L. Gilmer, Chicago, at 2:30 p. m., in Small Hall, Y. M. C. A. Building.

The Chairman then read his address. Discussed by Drs. M. H. Fletcher, Cincinnati; Frederick B. Noyes, Chicago; James E. Power, Providence, R. I.; Eugene S. Talbot, Chicago.

The Chairman appointed the three following as members of the Executive Committee: Drs. William E. Fisher, New York; J. E. Power, Providence, R. I.; Frederick B. Noyes, Chicago.

Dr. Stewart L. McCurdy, Pittsburg, Pa., read a paper on "The Pathology and Treatment of Alveolar Abscess." Discussed by Drs. George V. I. Brown, Milwaukee, Wis.; J. E. Power, Providence, R. I.; William E. Fisher, New York; Eugene S. Talbot, Chicago; Frederick Noyes, Chicago, and C. W. Harned, Iowa City, Iowa.

Dr. Frederick B. Noyes, Chicago, read a paper on "The Relation of the Teeth to the Development of the Jaws and the Face." Discussed by Drs. M. H. Fletcher, Cincinnati; B. E. Lischer, St. Louis; J. Porter Farm, Ardmore, Okla.; Stewart L. McCurdy, Pittsburg, Pa., and Eugene S. Talbot, Chicago.

Dr. Nelson M. Black, Milwaukee, Wis., read a paper on "Improvement in the General Health of Children Having an Inclination toward Nasal Stenosis by Widening the Nasal Arch." Discussed by Drs. J. Porter Farm, Ardmore, Okla.; Richard Summa, St. Louis; Frederick B. Noyes, Chicago; George V. I. Brown, Milwaukee, Wis., and Eugene S. Talbot, Chicago.

WEDNESDAY, JUNE 8—MORNING

A Committee on Nominations was appointed as follows: Drs. M. H. Fletcher, Cincinnati; L. P. Bethel, Columbus, Ohio, and J. E. Power, Providence, R. I.

A symposium was presented on "How Shall the Stomatologist be Educated," by Drs. Eugene S. Talbot, Chicago; James E. Power, Providence, R. I.; M. H. Cryer, Philadelphia.

These three papers were discussed by Drs. J. N. Farrar, New York; Arthur R. Dray, Philadelphia; Eugene H. Smith, Boston; M. H. Fletcher, Cincinnati; Stewart L. McCurdy, Pittsburg, Pa.; J. P. Gray, Nashville, Tenn.; N. P. Colwell, Chicago; Arthur Dean Bevan, Chicago; John M. Dodson, Chicago; Frederick B. Noyes, Chicago; G. V. I. Brown, Milwaukee; Fred C. Zapffe, Chicago; H. A. Potts, Chicago; J. M. Matthews, Liberty, Mo.; T. W. Brophy, Chicago.

On recommendation of the Secretary the following resolution was passed:

Resolved, That a committee of three be appointed by the chairman to confer with the Association of American Medical Colleges and the Council on Medical Education of the American Medical Association and with such other bodies and individuals as may be necessary to bring about harmonious results in stomatologic education.

WEDNESDAY, JUNE 8—AFTERNOON

Dr. M. H. Fletcher, Cincinnati, read a paper entitled "A Study of the Repair of the Cementum." Discussed by Drs. Frederick Noyes, Chicago; G. V. I. Brown, Milwaukee, Wis; T. W. Brophy, Chicago; Eugene S. Talbot, Chicago; William E. Fisher, New York, and Frederick B. Noyes, Chicago.

Dr. Henry R. Harrower, Chicago, read a paper on "Metabolism and Mouth Disease." Discussed by Drs. Eugene S. Talbot, Chicago, and G. V. I. Brown, Milwaukee, Wis.

Dr. Herbert A. Potts, Chicago, read a paper on "The Teeth as a Factor in Pathogenesis."

Dr. Frederick B. Moorehead, Chicago, read a paper on "The Teeth and Alveolar Processes as Points of Entrance for the Tubercle Bacillus."

These two papers were discussed by Drs. James E. Power, Providence, R. I.; M. H. Fletcher, Cincinnati; T. W. Brophy, Chicago; Eugene S. Talbot, Chicago; William E. Fisher, New York; V. P. Blair, St. Louis; Stewart L. McCurdy, Pittsburg, Pa.; H. A. Potts and F. B. Moorehead, Chicago.

The Chairman appointed a Committee on Stomatologic Education, as specified above, as follows: Chairman, Dr. Eugene S. Talbot, Chicago; Dr. H. E. Potts, Chicago, and Dr. Frederick B. Moorehead, Chicago.

THURSDAY, JUNE 9—MORNING

On recommendation of the Nominating Committee, the following officers were elected for the ensuing year: Chairman, Dr. S. L. McCurdy, Pittsburg; Vice-Chairman, Dr. Virgil Loeb, St. Louis; Secretary, Dr. Eugene S. Talbot, Chicago; Delegate, Dr. G. V. I. Brown, Milwaukee, Wis.; Alternate, Dr. M. H. Fletcher, Cincinnati.

Dr. Lee Wallace Dean, Iowa City, Iowa, read a paper on "The Influence on the Nose of Widening the Palatal Arch." Discussed by Drs. G. V. I. Brown, Milwaukee, Wis.; Eugene S. Talbot, Chicago; Stewart L. McCurdy, Pittsburg, Pa.; L. P. Bethel, Columbus, Ohio, and M. H. Fletcher, Cincinnati.

Dr. James E. Power, Providence, R. I., read a paper on "The Value of Vaccines in Oral Surgery." Discussed by Drs. G. V. I. Brown, Milwaukee, Wis.; Stewart L. McCurdy, Pittsburg, Pa.; W. E. Fisher, New York; M. H. Fletcher, Cincinnati; L. W. Dean, Iowa City, Iowa, and Eugene S. Talbot, Chicago.

Dr. G. V. I. Brown, Milwaukee, Wis., read a paper on "The Surgical Principles of Hair-Lip Operation." Discussed by Drs. Stewart L. McCurdy, Pittsburg, Pa., and M. H. Fletcher, Cincinnati.

Dr. Bertha E. Bush, Chicago, read a paper on "The Close Relations between the Physician and the Dentist." Discussed by Dr. Lee Wallace Dean.

Dr. Charles M. Whitney, Boston, read a paper on "The Mouth Lesions of Syphilis and the Dangers Arising Therefrom." Discussed by Dr. Stewart L. McCurdy, Pittsburg, Pa.

Dr. Vida A. Latham, Chicago, read a paper on "Systemic Conditions in Relation to Oral Symptoms; Pain, Fetor and Sepsis." Discussed by Drs. G. V. I. Brown, Milwaukee, Wis., and M. H. Fletcher, Cincinnati.

SECTION ON DISEASES OF CHILDREN

TUESDAY, JUNE 7—AFTERNOON

The meeting was called to order at 2 p. m., in Grand Avenue Presbyterian Church, by the Chairman, Dr. William J. Butler, Chicago, who then read his address entitled, "Enteroptosis in Children."

Drs. Samuel M. Hamill and Kenneth D. Blackfan, Philadelphia, presented a paper on "The Diagnosis and Treatment of Chronic Intestinal Indigestion in Children." Discussed by Drs. H. B. Coit, Newark, N. J.; C. G. Kerley, New York; L. T. Royster, Norfolk, Va.; H. M. McClanahan, Omaha, Neb.; E. E. Graham, Philadelphia; John Lovett Morse, Boston; F. B. Talbot, Boston, and S. M. Hamill.

Dr. Thomas D. Parke, Birmingham, Ala., read a paper on "Further Report of Cases with Complicating Ileocolitis and Probably Due to Acidosis." Discussed by Drs. John Zahorsky, St. Louis; Isaac A. Abt, Chicago, and T. D. Parke, Birmingham, Ala.

Dr. C. Gilmore Kerley, New York, read a paper on "Atypical Scarlet Fever." Discussed by Drs. O. T. Moore, St. Louis; S. E. Munson, Springfield, Ill.; Kepler, Michigan, and C. G. Kerley, New York.

Dr. H. M. Folkes, Biloxi, Miss., read a paper on "Infectious Diseases in Negro Children." Discussed by Drs. L. T. Royster, Norfolk, Va., and H. M. Folkes, Biloxi, Miss.

Dr. John Lovett Morse, Boston, read a paper on "Agar-Agar in the Treatment of Constipation in Childhood." Discussed by Drs. Alfred Friedlander, Cincinnati; C. G. Kerley, New York; Godfrey R. Pisek, New York, and J. L. Morse, Boston.

The Secretary read a letter from Trustees of the American Medical Association concerning the establishment of a pediatric journal, and moved that the Section endorse the proposition and that the matter be referred to the Executive Committee of the Section with power to act. Discussed by Drs. William Butler, Chicago; C. G. Kerley, New York; J. M. Dodson, Chicago; A. C. Cotton, Chicago; D. W. Graham, Chicago; F. S. Churchill, Chicago; G. H. E. Rosamond, Memphis; and J. W. Van Derslice, Chicago.

WEDNESDAY, JUNE 8—MORNING

Drs. Jerome S. Leopold, New York, and I. Rosenstern, Berlin, presented a paper on "The Significance of Tuberculides in the Diagnosis of Tuberculosis in Infants." Discussed by Drs. F. C. Neff, Kansas City, Mo.; Frank Gengenbach, Denver; W. D. Hoskins, Indianapolis; C. F. Wahrer, Fort Madison, Iowa; C. G. Kerley, New York, and J. S. Leopold, New York.

Theodore J. Elterich, Pittsburg, Pa., read a paper on "A Clinical Study of a Case of Pseudoleucemic Anemia of Infancy." Discussed by Drs. J. B. Hultgen, Chicago; C. F. Wahrer, Fort Madison, Iowa, and T. J. Elterich, Pittsburg, Pa.

Dr. A. D. Bevan, Chicago, read a paper on "The Surgical Treatment of Congenital Pyloric Stenosis." Discussed by Drs. H. M. McClanahan, Omaha; John Lovett Morse, Boston; Isaac A. Abt, Chicago; E. J. Porteous, Atlantic City, N. J.; C. G. Kerley, New York; H. Stern, New York; Katherine B. Richardson, Kansas City, Mo.; F. B. Talbot, Boston; F. S. Churchill, Chicago; Frank Gengenbach, Denver; H. L. Coit, Newark, N. J.; William Butler, Chicago, and A. D. Bevan, Chicago.

Dr. H. M. McClanahan, Omaha, Neb., read a paper entitled, "A Brief History of the Nebraska Epidemic of Poliomyelitis." Discussed by Drs. C. A. Anderson, Stromsburg, Neb.; E. H. Bartley, New York., and H. M. McClanahan, Omaha, Neb.

Dr. J. W. Van Derslice, Chicago, read a paper on "Rachitis." No discussion.

Dr. Heinrich Stern, New York, read a paper on "Blood-Letting in Children." Discussed by Drs. E. M. Sill, New York; A Jacobi, New York; William Butler, Chicago, and H. Stern, New York.

Dr. H. L. Coit, Newark N. J., presented an instrument for determining temperature in sterilization of milk.

WEDNESDAY, JUNE 8—AFTERNOON

The following four papers were discussed together:

Dr. A. C. Cotton, Chicago, "Disturbances of Lactation."

Dr. Charles Douglas, Detroit, "Feeding of Fats to Infants and Difficulties Encountered in Feeding Them."

Dr. F. B. Talbot, Boston, "The Digestion of Fat in Infancy."

Dr. Thomas S. Southworth, New York, "Complemental Feeding of the Infant as an Effective Aid in Maintaining Maternal Nursing."

These four papers were discussed by Drs. John Zahorsky, St. Louis; Effa Davis, Chicago; J. P. Sedgwick, Minneapolis; John Lovett Morse, Boston; C. F. Wahrer, Fort Madison, Iowa; Jules M. Brady, St. Louis; C. G. Kerley, New York; A. C. Cotton, Chicago; Charles Douglas, Detroit; F. B. Talbot, Boston, and T. S. Southworth, New York.

Drs. Jerome Alexander and Jesse G. M. Bullowa, New York, presented a paper on "The Influence of Colloidal Protection on Milk." Discussed by Drs. F. S. Churchill, Chicago; E. H. Bartley, New York; Thomas S. Southworth, New York, and Jerome Alexander, New York.

Dr. J. P. Sedgwick, Minneapolis, read a paper on "Creatinin and Creatin Metabolism in Children." No discussion.

Dr. E. H. Bartley, New York, offered the following resolution, which was carried:

Resolved, That the Chairman of this section appoint a committee of three members to be known as the Committee on Hygiene and Publicity to act in conjunction with or under the direction of the proposed Committee on Health and Public Instruction of the American Medical Association.

The Chairman appointed the following on that committee: Drs. E. H. Bartley, New York; A. C. Cotton, Chicago, and Dr. C. G. Kerley, New York.

THURSDAY, JUNE 9—MORNING

Dr. Isaac A. Abt, Chicago, read a paper on "A Case of Amaurotic Family Idiocy with Autopsy and Histologic Report." Discussed by Drs. John Lovett Morse, Boston, and I. A. Abt, Chicago.

Dr. C. C. Rogers, Chicago, read a paper on "Intracranial Surgical Lesions in Children." Discussed by Drs. E. H. Abbott, Elgin, Ill.; C. G. Kerley, New York, and C. C. Rogers, Chicago.

Dr. Samuel Lloyd, New York, read a paper on "Surgical Treatment of Empyema." Discussed by Drs. E. E. Graham, Philadelphia; I. A. Abt, Chicago; C. C. Rogers, Chicago, and Samuel Lloyd, New York.

Dr. J. Ross Snyder, Birmingham, Ala., presented the report of the Nominating Committee, recommending the election of the following officers: Chairman, Dr. Samuel M. Hamill, Philadelphia; Vice-Chairman, Dr. Thomas D. Parke, Birmingham, Ala.; Secretary, Dr. L. T. Royster, Norfolk, Va.; Delegate, Dr. A. C. Cotton, Chicago.

The report as read was adopted and the officers were elected.

Dr. Snyder presented the report of the Executive Committee as follows:

In compliance with a motion adopted in the Section on the day previous, your Executive Committee held a meeting at 8:30 a. m., June 8, 1910, to take action on the proposed establishment of a special journal devoted to the diseases of children. After unanimously voting approval of the recommendation to the Board of Trustees for the publication of a journal of this nature, the Executive Committee adjourned to meet a committee appointed some time ago by the Board of Trustees to consider the desirability of such a journal, its name, its purposes and scope, manner of publication, etc. At this joint committee meeting it was voted to recommend to the Trustees that the proposed journal be called the *American Journal of the Diseases of Children*. The following recommendations were also adopted: that it should contain original articles and abstracts; that it should contain an occasional complete review, compiled by men appointed by the executive board; that it should begin as a bimonthly of approximately 64 pages in each issue; that it should be of smaller size than the *Archives of Internal Medicine*; that the editors should elect their own chairman; and that the subscription price be determined by the Trustees.

The Russell Sage Foundation, Department of Child-Helping, asks that the Section lend its endorsement to the particular kind of work that this department is carrying on. A feature of this work is the placing of infants from foundling asylums, the training of social workers, etc. Several members of your committee are familiar with the nature and character of this work. The work has been endorsed by the American Pediatric Society. Therefore, the committee would recommend that the Section lend its approval to the work of the Department of Child-Helping, Russell Sage Foundation.

It was moved by Dr. G. R. Pisek, New York, seconded and carried, that the report as read be adopted.

Dr. Samuel W. Kelley, Cleveland, read a paper on "Surgical Mistakes in Practice on Infants and Children." Discussed by Drs. Frank Gengenbach, Denver; John Zahorsky, St. Louis, and S. W. Kelley, St. Louis.

Dr. E. Mather Sill, New York, read a paper entitled "Dietary Studies of Undernourished School Children in New York City." Discussed by Drs. N. R. Coleman, Columbus, Ohio; C. F. Wahrer, Fort Madison, Iowa; C. G. Kerley, New York; S. W. Kelley, Cleveland; G. M. Cattermole, Colorado.

President William H. Welch addressed the Section.

THURSDAY, JUNE 9—AFTERNOON

Dr. S. G. Gant, New York, read a paper on "Treatment of Some Colonic, Sigmoidal, Rectal and Anal Affections Common to Infancy and Childhood." Discussed by Drs. L. J. Hirschman, Detroit; C. F. Wahrer, Fort Madison, Iowa; G. S. Hanes, Louisville, Ky.; E. H. Thrailkill, Kansas City, Mo., and S. G. Gant, New York.

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Drs. Louis A. Levison and Harry Dachtler, Toledo, Ohio, read a paper on "A Clinical and Roentgenographic Study of the Essential Differences Between the Physical Findings in Childhood and Adult Life." Discussed by Dr. F. Smithies, Ann Arbor, Mich.

Dr. C. F. Wahrer, Fort Madison, Iowa, read a paper on 'Foibles in Specialism." No discussion.

Drs. Eli Long and E. Caldwell, New York, presented a paper on "A Study of the Anatomic Index in Children." Discussed by Drs. Cattermole, Colorado, and Eli Long, New York.

Dr. L. T. Royster, Norfolk, Va., read a paper on "The Prevention of Infant Mortality from an Educational Point of View." Discussed by Dr. S. W. Kelley, Cleveland.

Dr. H. W. Cheney, Chicago, read a paper on "Subnormal Temperature in Infancy." Discussed by Drs. J. S. Leopold, New York; Godfrey R. Pisek, New York; William Butler, Chicago; Frank Gengenbach, Denver, and H. W. Cheney, Chicago.

SECTION ON DERMATOLOGY

TUESDAY, JUNE 7—AFTERNOON

The Section was called to order at 2 p. m. in Odeon Recital Hall by the Chairman, Dr. Grover W. Wende, Buffalo, who delivered an address on "Dermatology in General Practice."

Dr. Frank Crozer Knowles, Philadelphia, read a paper on "Purpura Caused by the Ingestion of the Iodids." Discussed by Drs. Howard Fox, New York; J. A. Fordyce, New York, and F. C. Knowles, Philadelphia.

Dr. Alfred Schalek, Omaha, Neb., read a paper on "Pemphigus Foliaceus. Report of a Case." Discussed by Drs. M. McMahon, Palmyra, Ill.; H. H. Hazen, Washington, D. C.; E. S. Lain, Oklahoma City, and A. Schalek, Omaha, Neb.

Dr. Charles J. White, Boston, read a paper on "Alopecia." Discussed by Drs. William O. Roop, Dayton; Frank C. Knowles, Philadelphia; J. M. King, Nashville; Alfred Schalek, Omaha; J. B. Kessler, Iowa City; Isadore Dyer, New Orleans; M. L. Heidingsfeld, Cincinnati; William Frick, Kansas City; William A. Pusey, Chicago; J. Grindon, St. Louis; J. B. Kessler, Iowa City, Iowa; Frances Rowley, Galveston, Tex., and C. J. White, Boston.

Dr. William Frick, Kansas City, Mo., read a paper on "Dermatitis Exfoliativa." Discussed by Dr. Frank C. Knowles, Philadelphia.

Drs. William T. Corlett and Harold Newton Cole, Cleveland, presented "A Report of Three Epidemics of Anomalous Scarlet Fever." Discussed by Dr. W. L. Baum, Chicago.

The Chairman named the following Nominating Committee: Drs. Charles J. White, W. L. Baum and Howard Fox.

WEDNESDAY, JUNE 8—MORNING

This was a clinical meeting.

Dr. R. P. Price, Nevada, Mo., presented two cases of pellagra from the Missouri State Hospital, No. 3. These cases were discussed by Drs. A. Ravogli, Cincinnati; James W. Babcock, Columbia, S. C.; William T. Corlett, Cleveland; J. W. King, Nashville, Tenn., and John D. Long, United States Marine and Public Health Hospital Service, Washington, D. C.

WEDNESDAY, JUNE 8—AFTERNOON

The following five papers were read and discussed as a Symposium on Cancer:

Dr. Leo Loeb, Philadelphia: "The Present Status of the Etiology of Malignant Growths of the Skin."

Dr. John A. Fordyce, New York: "Pathology of the Malignant Growths of Epithelial Tissue," with lantern-slide demonstrations.

Dr. F. B. Mallory, Boston: "Pathology of Malignant Diseases of Non-Epithelial Formation," with lantern-slide demonstrations.

Dr. Joseph C. Bloodgood, Baltimore: "Surgical Treatment of Cutaneous Malignant Growths."

Dr. William Allen Pusey, Chicago: "Treatment of Malignant Growths of the Skin from a Dermatologic Standpoint."

These five papers were discussed by Drs. E. R. LeCount, Chicago; G. W. Jobling, Chicago; F. B. Mallory, Boston; J. W. Vaughan, Detroit; Willy Meyer, New York; William T. Corlett, Cleveland; A. Ravogli, Cincinnati; J. A. Fordyce, New York; J. C. Bloodgood, Baltimore, and W. A. Pusey, Chicago.

On motion of Dr. Corlett, a vote of thanks was extended to those who had participated in this symposium, and especially to those who were not members of the Section.

On motion the election of officers, scheduled for Thursday morning, was postponed until the afternoon session.

THURSDAY, JUNE 9—MORNING

This was a clinical session.

Dr. George A. Zeller, Superintendent of the State Hospital at Peoria, Ill., presented a number of pellagra cases. Discussed by Drs. James W. Babcock, Columbia, S. C.; Marcus Haase, Memphis, Tenn.; Tinsley Browne, Hamilton, Mo.; Oliver S. Ormsby, Chicago; Howard Fox, New York; Isadore Dyer, New Orleans, and A. J. Vance, Harrison, Ark.

On motion of Dr. William A. Pusey, Chicago, as amended by Dr. M. L. Heidingsfeld, Cincinnati, a vote of thanks was unanimously extended to the Board of Administration of the State of Illinois and to the Board of Governors of the Missouri State Hospital No. 3, at Nevada, Mo., for their kindness and interest in sending a number of pellagra patients to this meeting, where they had afforded unusual opportunity for the study and investigation of this very important subject; also to Drs. Zeller, Lamson, Price and Babcock and others, who had assisted in this valuable presentation.

THURSDAY, JUNE 9—AFTERNOON

Dr. James N. Hyde, Chicago, presented a paper on the "Results of Experience with the Noguchi Modification of the Wassermann Serodiagnosis Test for Syphilis," which was read by Dr. J. F. Waugh, Chicago.

Dr. B. C. Corbus, Chicago, read a paper entitled "Two Years' Experience with the Wassermann Reaction in Practice, being a Preliminary Report on Fifty-seven Cases Treated from the Standpoint of the Wassermann Reaction."

These two papers were discussed by Drs. J. Grindon, St. Louis; M. L. Heidingsfeld, Cincinnati; J. A. Fordyce, New York; William Litterer, Nashville, Tenn.; W. T. Corlett, Cleveland; Alfred Schalek, Omaha; E. H. Martin, Hot Springs, Ark.; Edward Bowe, Jacksonville, Ill.; Oliver S. Ormsby, Chicago; V. J. Cohenour, Joliet, Ill.; J. F. Waugh, Chicago, and B. C. Corbus, Chicago.

On recommendation of the Nominating Committee the following officers were elected for the ensuing year: Chairman, James C. White, Boston, Vice-Chairman, Martin F. Engman, St. Louis; Secretary, H. R. Varney, Detroit; Delegate, J. A. Fordyce, New York.

Dr. O. H. Foerster, Milwaukee, read a paper on "Primula Dermatitis." No discussion.

Dr. Marcus Haase, Memphis, read a paper on "A Chronic Itching Papular Eruption of the Axilla, Pubes and Breast." Discussed by Dr. J. A. Fordyce, New York.

Drs. Isadore Dyer and Ralph Hopkins, New Orleans, presented a paper on "The Diagnosis of Leprosy." Discussed by Drs. J. Grindon, St. Louis; A. Ravogli, Cincinnati; Marcus Haase, Memphis; S. T. Darling, Ancon Hospital, Canal Zone; William Litterer, Nashville, and Isadore Dyer, New Orleans.

Dr. Oliver S. Ormsby, Chicago, read a paper on "Lichen Planus Atrophicus (Hallopeau)." No discussion.

Dr. M. L. Heidingsfeld, Cincinnati, presented a paper on "Hairy Tongue," with lantern-slide illustrations. No discussion.

Dr. Richard L. Sutton, Kansas City, Mo., read a paper on "Lichen Nitidus." Discussed by Drs. J. A. Fordyce, New York, and R. L. Sutton, Kansas City, Mo.

On motion of Dr. M. L. Heidingsfeld, Cincinnati, a vote of thanks was extended to the retiring Chairman and to the Secretary for their efficient services; also to the members of the Section living in St. Louis for their kind entertainment, and their efforts which had resulted in making this one of the most successful meetings in the history of this organization.

FRIDAY, JUNE 10—MORNING

This was a clinical meeting, devoted to the presentation of patients and specimens.

Dr. R. H. Davis, St. Louis, showed a case for diagnosis, possibly syphilis of the face. No discussion.

Dr. Davis also showed a case of bromid eruption of the leg. Discussed by Drs. Oliver S. Ormsby, Chicago; Frank C. Knowles, Philadelphia; J. M. King, Nashville; Julius Grinker, Chicago; and R. H. Davis, St. Louis.

Dr. Martin F. Engman, St. Louis, showed a case of hypertrophic lupus in a negro boy. No discussion.

Dr. Engman showed a case of blastomycotic dermatitis. Discussed by Drs. A. Ravogli, Cincinnati; J. B. Kessler, Iowa City; John D. Seba, Bland, Mo.; J. M. King, Nashville, and Engman.

Dr. Engman showed a case of keratosis follicularis (Darier). Discussed by Dr. F. C. Knowles, Philadelphia.

Dr. Engman showed a case for diagnosis. Discussed by Drs. Alexander S. Wolf, St. Louis; William T. Cortlett, Cleveland; and H. H. Hazen, Washington.

Dr. Engman showed a case of mycosis fungoides. Discussed by Dr. Howard Fox, New York.

Dr. W. H. Mook, St. Louis, showed a case of epidermolysis bullosa and one of vitiligo. The latter was discussed by Dr. Frank C. Knowles, Philadelphia.

Dr. William W. Graves, St. Louis, showed a number of boys with scaphoid scapula and made some remarks on the subject. Discussed by Drs. A. Jacobi, New York; Ira C. Chase, Fort Worth; Alfred Saenger, Hamburg, Germany; A. Ravogli, Cincinnati; Julius Grinker, Chicago; Albert E. Sterne, Indianapolis; and W. W. Graves, St. Louis.

Dr. R. H. Davis, St. Louis, showed the specimen of a case of congenital ichthyosis.

Drs. Martin F. Engman and W. H. Mook, St. Louis, showed cases of onychia; scleroderma; multiple benign cystic epithelioma; mycosis fungoides; lymphangioma circumscriptum; xanthoma diabeticorum; mycosis fungoides; acne excoriativa; xanthoma planum; and a large papillomatous nevus treated with carbon dioxid snow.

On motion of Dr. William T. Cortlett, Cleveland, a unanimous vote of thanks was extended to the members of the local committee for collecting this valuable clinical material and for the energy shown by the officers of the Section, which had helped to bring this meeting to such a successful close.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

TUESDAY, JUNE 7—MORNING

The Chairman, Dr. David L. Edsall, Philadelphia, called the meeting to order at 2:30 p. m., in the Delmar Avenue Congregational Church.

Dr. Edsall delivered the Chairman's address, entitled "Some Reforms Accomplished and Others Needed in Pharmacotherapy." No discussion.

Prof. Joseph P. Remington, Philadelphia, delivered the address of Delegates of the American Pharmaceutical Association.

Dr. C. S. N. Hallberg, of Chicago, made a motion that the members of the American Pharmaceutical Association who were delegates and who might not be pharmaceutical members of the American Medical Association might have the privilege of the floor and be invited to participate with the Section of Pharmacology and Therapeutics in the discussion. Seconded and carried.

Reports of Standing Committees were then called for.

The Secretary, Dr. Murray G. Motter, Washington, read the report of the Executive Committee on Habit-Forming Drugs. The report was on motion transmitted to the House of Delegates with the recommendation that it be referred to the Committee on Legislation. [The House referred it to the new Council on Health and Public Instruction. THE JOURNAL, June 18, page 2077. The text of the report appears in THE JOURNAL, June 18, page 2072.]

Dr. Motter announced that the report of the Committee on United States Pharmacopeia had been published in the reports presented to the House of Delegates. [It appears in THE JOURNAL, June 18, page 2088.]

Dr. R. A. Hatcher, New York, Chairman of the Committee, submitted the report of the Committee on National Formulary. Discussed by Drs. F. E. Stewart, Philadelphia; C. S. N. Hallberg, Chicago; A. Jacobi, New York.

On motion, action on the report was deferred until Dr. Hallberg read his paper.

Dr. Edsall, the Chairman, appointed the following substitutes to act as Executive Committee: Drs. R. A. Hatcher, New York; H. M. Whelpley, St. Louis, and W. C. Wescott, Atlantic City, N. J.

Dr. F. E. Stewart, Philadelphia, made a motion, which was seconded and carried, that papers whose authors were absent should be referred to the Executive Committee for recommendation as to whether or not they should be read to the Section.

Dr. C. S. N. Hallberg, Chicago, read a paper entitled "The National Formulary from the Pharmaceutical Standpoint."

Dr. F. E. Stewart, Philadelphia, made a motion that the report of the Committee on National Formulary be adopted and the committee continued, provided the American Pharmaceutical Association Council having control of the Revision of the National Formulary were willing to abide by the rules of the Council on Pharmacy and Chemistry of the American Medical Association. Discussed by Drs. A. S. Loevenhart, Madison, Wis.; A. Jacobi, New York; A. T. Livingston, Jamestown, N. Y.; C. S. N. Hallberg, Chicago; R. A. Hatcher, New York.

A motion by Dr. A. Jacobi, that the report of the committee be accepted and the committee discharged was carried.

The paper of Mr. M. I. Wilbert, Washington, D. C., on "A. Forecast of the U. S. P. IX.," was read by Dr. M. G. Motter, Washington, on recommendation of the Executive Committee. Discussed by Drs. A. S. Loevenhart, Madison, Wis.; C. S. N. Hallberg, Chicago, and F. E. Stewart, Philadelphia.

WEDNESDAY, JUNE 8—MORNING

The Section held a joint meeting with the Section on Practice of Medicine at the Third Baptist Church.

The Chairman of the Section on Practice of Medicine, Dr. George Blumer, New Haven, Conn., called the meeting to order at 9:30 a. m.

The following four papers were read and discussed as a Symposium on the Circulatory Disorders in Acute Infectious Diseases:

Dr. W. G. MacCallum, New York: "Pathologic Physiology of the Circulatory Failure of Acute Infectious Disease."

Dr. George Dock, New Orleans: "Treatment of the Circulatory Failure of Acute Infectious Diseases with Drugs Other than Alcohol."

Dr. Joseph L. Miller, Chicago: "The Physiologic Action, Uses and Abuses of Alcohol in the Circulatory Disturbances of Acute Infection."

Dr. A. N. Richards, Chicago: "The Action of Alcohol on the Mammalian Heart."

These four papers were discussed by Drs. A. S. Loevenhart, Madison, Wis.; R. C. Cabot, Boston, DeLancey Rochester, Buffalo, N. Y.; J. A. Lichty, Pittsburg; Haven Emerson, New York; G. C. Smith, Boston; A. T. Livingston, Jamestown, N. Y.; G. W. McCaskey, Fort Wayne, Ind.; C. F. Hoover, Cleveland; A. Jacobi, New York; Lawrence Litchfield, Pittsburg; Frank A. Jones, Memphis, Tenn.; B. C. Walt, Little Rock, Ark.; George Dock, New Orleans, and J. L. Miller, Chicago.

This ended the joint meeting.

Dr. Lewis A. Conner, New York, read a paper entitled, "The Visceral Anesthesias of Tabes Dorsalis in Relation to the Diagnosis of Acute Inflammatory Conditions in the Abdomen, with an Illustrative Case." Discussed by Drs. L. Litchfield, Pittsburg; J. H. Musser, Philadelphia; C. F. Hoover, Cleveland and Lewis A. Conner.

WEDNESDAY, JUNE 8—AFTERNOON

The Section held a joint meeting with the Section on Pathology and Physiology for the consideration of a Symposium on Recent Advances in the Knowledge of Diabetes and its Treatment.

For the minutes see the report of the Section on Pathology and Physiology, which appear on the following page.

THURSDAY, JUNE 9—MORNING

Dr. R. A. Hatcher, New York, presented the report of the Nominating Committee recommending for election the following: Chairman, Dr. Lawrence Litchfield, Pittsburg, Pa.; Vice-Chairman; Dr. George B. Wallace, New York; Secretary, Mr. M. I. Wilbert, Washington, D. C.; Delegate, Dr. Reid Hunt, Washington, D. C.

The report of the Nominating Committee was accepted and the Secretary, Dr. M. G. Motter, was authorized to cast the ballot for the election of the nominees.

Dr. C. S. N. Hallberg, Delegate, reported that he had presented the names of William H. Glover, Lawrence, Mass., and Leonard A. Seltzer, Detroit, for pharmaceutical members of this Section and that both applications had been acted on favorably.

In accordance with instructions, Dr. Hallberg said that he had presented the Report of the Executive Committee to which had been referred the Habit-forming Drugs Legislation and that this report was referred as recommended to the Committee on National Legislation of the A. M. A. He said that when the report of the Reference Committee on National Legislation was made it recommended that the A. M. A. recommend to the states that the state drug laws be made or changed to conform with the federal Food and Drugs Act. Dr. Hallberg, feeling that it was a very serious thing for the Association to go on record as favoring the patterning of the state laws after the federal act, stated that the federal act was a compromise

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measure which permitted any kind of drugs to be sold, provided that the ingredients were named on the label. At the suggestion of President Welch this recommendation had been amended so that it provided that the Association recommended that drugs must conform with the requirements of the United Pharmacopeia and the National Formulary.

It was moved and carried that the report of the Delegate be accepted.

The following papers were read as a Symposium on Extrapharmacal Methods:

The paper prepared by Dr. C. S. Potts, Philadelphia, on "The Practical Uses of Electricity in Medicine," was read by the Secretary, in conformity with a motion made following the recommendation of the Executive Committee. Discussed by Drs. G. Betton Massey, Philadelphia; David Paulson, Hinsdale, Ill.; A. T. Livingston, Jamestown, N. Y.; H. M. Whelpley, St. Louis, and Haven Emerson, New York.

The paper of Dr. Thomas McCrae, Baltimore, "The Principles of Hydrotherapy," was read by the Secretary. Discussed by Drs. David Paulson, Hinsdale, Ill., and H. M. Whelpley, St. Louis.

On recommendation of the Executive Committee, it was moved, seconded and carried that a paper by Dr. Alfred T. Livingstone, Jamestown, N. Y., not appearing on the program, be read. Dr. A. T. Livingston then read his paper on "The Physiologic Test and Standardization of Ergot." Discussed by Drs. Haven Emerson, New York, and A. T. Livingston, Jamestown, N. Y.

THURSDAY, JUNE 9—AFTERNOON

The meeting was called to order in the Delmar Avenue Congregational Church by Dr. Lawrence Litchfield, Pittsburg, Pa., the Chairman-Elect, at 2:09 p. m.

Dr. R. A. Hatcher, New York, read a paper written by himself and Dr. Harold C. Bailey, New York, on "The Clinical Use of Strophanthus." Discussed by Drs. J. L. Miller, Chicago; M. Rosewater, Cleveland; L. Litchfield, Pittsburg; H. C. Bailey, New York, and R. A. Hatcher, New York.

Dr. Haven Emerson, New York, read a paper on "Blood Pressure in Tuberculosis." Discussed by Drs. M. Rosewater, Cleveland; J. L. Miller, Chicago; J. M. Bessey, Toledo, Ohio, and Haven Emerson, New York.

In the absence of Dr. James M. Anders, Philadelphia, the Secretary, Dr. M. G. Motter, Washington, D. C., read Dr. Anders' paper on "Vaccines in Typhoid Fever." No discussion.

SECTION ON PATHOLOGY AND PHYSIOLOGY

TUESDAY, JUNE 7—AFTERNOON

The meeting was called to order at 2:10 p. m., in the Lecture Hall of Y. M. C. A. Building, by the Chairman, Dr. H. Gideon Wells, Chicago.

Applications for associate membership in the Section having been received from Professors P. B. Hawk, University of Illinois; A. J. Carlson, University of Chicago; Leo Loeb, University of Pennsylvania, and Graham Lusk, Cornell University Medical School, their names were recommended for presentation to the House of Delegates.

Dr. Carl J. Wiggers, Ann Arbor, Mich., read a paper on "The Prognostic Significance of Pulse-Pressure Changes During Hemorrhage." Discussed by Dr. Yandell Henderson, New Haven, Conn.

Dr. Arthur D. Hirschfelder, Baltimore, read a paper on "The Functional Disturbances in Paroxysmal Tachycardia." Discussed by Drs. S. A. Matthews, Chicago, and A. D. Hirschfelder, Baltimore.

Dr. Robert B. Gibson, Columbia, Mo., read a paper on "The Action of Adrenalin on the Mammalian Heart." Discussed by Drs. C. J. Wiggers, Ann Arbor, Mich.; S. A. Matthews, Chicago; and R. B. Gibson, Columbia, Mo.

Dr. Clyde Brooks, Chicago, read a paper on "The Action of Alcohol on the Normal, Intact, Unanesthetized Animal." Discussed by Drs. Yandell Henderson, New Haven, Conn.; Ida H. Hyde, Lawrence, Kan.; and Clyde Brooks, Chicago.

Dr. C. C. Guthrie, Pittsburg, Pa., read a paper on "Survival of Engrafted Blood-Vessels." No discussion.

Ida H. Hyde, Lawrence, Kan., read a paper on "The Inhibitory Effects of Magnesium Sulphate, and the Nature of the Impulses in the Phrenic Nerves." Discussed by Dr. Louise G. Robinovitch, New York City.

Dr. Angus McLean, Detroit, Mich., read a paper on "Gangrene Following Carbon Monoxid (Coal-Gas) Poisoning." Discussed by Dr. H. G. Wells, Chicago.

The Chairman appointed the following as members of the Nominating Committee: Drs. A. D. Hirschfelder, Baltimore; Henry Albert, Iowa City, Iowa; and E. P. Lyon, St. Louis.

WEDNESDAY, JUNE 8—MORNING

Dr. A. S. Warthin, Ann Arbor, Mich., read a paper on "The Reaction of the Hemolymph Nodes to Infection and Intoxication." No discussion.

Dr. Henry Albert, Iowa City, Iowa, read a paper on "Diffuse Hypertrophy of the Mammary Glands of the Female." Discussed by Drs. A. S. Warthin, Ann Arbor, Mich.; James J. Terrill, Galveston, Tex.; Greer Baughman, Richmond, Va.; and Henry Albert, Iowa City, Iowa.

Dr. Arthur E. Hertzler, Kansas City, Mo., read a paper on "The Pathogenesis of Cancer." No discussion.

Dr. Louise G. Robinovitch, New York, read a paper on "Electric Anesthesia and Electric Resuscitation After Heart-Failure Under Chloroform or Electrocution." No discussion.

Drs. H. E. Robertson and A. J. Chesley, Minneapolis, presented a paper on "Pathology and Bacteriology of Anterior Poliomyelitis," which was read by Dr. Robertson. Discussed by Drs. W. H. Welch, Baltimore; and H. E. Robertson, Minneapolis.

WEDNESDAY, JUNE 8—AFTERNOON

This was a joint meeting with the Section on Pharmacology and Therapeutics.

The following five papers were read and discussed as a Symposium on Recent Advances in Knowledge of Diabetes and Its Treatment:

Dr. Graham Lusk, New York, "Metabolism in Diabetes."

Dr. J. J. R. MacLeod, Cleveland, "Various Forms of Experimental Diabetes and Their Significance for Diabetes Mellitus."

Dr. Joseph H. Pratt, Boston, "The Relation of the Pancreas to Diabetes."

Dr. R. T. Woodyatt, Chicago, "The Action of Glycol Aldehyd and Glycerin in Diabetes, and the Nature of Antiketogenesis."

Dr. George B. Wallace, New York, "Therapy and Dietetics of Diabetes."

These five papers were discussed by Drs. J. M. Allen, Liberty, Mo.; George C. Smith, Boston; J. A. Lichty, Pittsburg, Pa.; J. P. Matthews, Carlinville, Ill.; H. A. Freund, Detroit; Graham Lusk, New York; J. J. R. MacLeod, Cleveland; and R. T. Woodyatt, Chicago.

THURSDAY, JUNE 9—MORNING

The report of the Nominating Committee recommended the election of the following officers: Chairman, Dr. Yandell Henderson, New Haven, Conn.; Secretary, Dr. Leo Loeb, Philadelphia; Delegate, Dr. Walter L. Bierring, Iowa City, Iowa; Alternate, Dr. M. J. Rosenau, Boston. The report of the Nominating Committee was accepted and the Secretary was instructed to cast a ballot for the election of the nominees.

Dr. J. F. Hultgen, Chicago, read a paper on "Influence of Alcohol on the Kidneys." Discussed by Drs. A. S. Warthin, Ann Arbor, Mich.; H. G. Wells, Chicago; Daniel M. Eisendrath, Chicago; and J. F. Hultgen, Chicago.

Drs. Daniel N. Eisendrath and David C. Strauss, Chicago, presented a paper on "Effects of Compression of Its Vessels on the Parenchyma of the Kidney," which was read by Dr. Strauss. Discussed by Drs. V. C. Lespinasse, Chicago; D. N. Eisendrath, Chicago; Yandell Henderson, New Haven, Conn.; H. G. Wells, Chicago; and D. C. Strauss, Chicago.

Dr. Winfield S. Hall, Chicago, read a paper on "The Influence of Diet on the Chyle." Discussed by Drs. J. F. Hultgen, Chicago; and W. S. Hall, Chicago.

Dr. S. A. Matthews, Chicago, read a paper on "One of the Functions of the Duodenum." Discussed by Drs. I. H. Hyde, Lawrence, Kan.; W. C. McCarty, Rochester, Minn.; J. F. Hultgen, Chicago; W. G. McCallum, New York; J. T. Pilcher, Rochester, Minn.; and S. A. Matthews, Chicago.

Dr. William Carpenter McCarty, Rochester, Minn., read a paper on "Classification of Appendicitis, and the Relation of Chronic Appendicitis to Obliteration and Carcinoma (A Study of 5,000 Specimens Removed at Operation)." Discussed by Drs. J. F. Hultgen, Chicago; H. G. Wells, Chicago; and W. C. McCarty, Rochester, Minn.

THURSDAY, JUNE 9—AFTERNOON

The following five papers were read and discussed as a Symposium on the Progress in the Problems of Cancer:

Dr. Leo Loeb, Philadelphia, "Recent Progress and Present Status of Experimental Research in Cancer."

Dr. E. E. Tyzzer, Boston, "The Relation of Heredity to Cancer."

Dr. Richard Weil, New York, "The Biochemical Investigations of Cancer, and Its Diagnostic Applications."

Dr. F. B. Mallory, Boston, "Recent Progress in the Microscopic Anatomy and Differentiation of Cancer."

Dr. J. C. Bloodgood, Baltimore, "Recent Progress in Surgical Treatment of Malignant Growths."

These five papers were discussed by Drs. Louis B. Wilson, Rochester, Minn.; F. B. Mallory, Boston; and H. Gideon Wells, Chicago.

THE ST. LOUIS REGISTRATION

List of Members Who Registered at the St. Louis Session, June, 1910

The total registration at the St. Louis session was 4,084, an increase of 812 over last year's registration at Atlantic City. This is the third session in point of size.

In addition to the names of members given below, a number registered whose names are not given. These have not yet completed their membership, many having been subscribers only and some of them claiming membership without making application, as is required by the Constitution and By-Laws.

Below are given two summaries, one by sections and one by states.

REGISTRATION BY SECTIONS

Practice of Medicine	1,380
Obstetrics and Diseases of Women	296
Surgery	1,124
Ophthalmology	275
Laryngology and Otology	167
Nervous and Mental Diseases	119
Preventive Medicine and Public Health	95
Stomatology	55
Diseases of Children	157
Dermatology	84
Pharmacology and Therapeutics	42
Pathology and Physiology	66
Registered without specifying any one section	105

REGISTRATION BY STATES

Alabama	22	Nebraska	37
Arizona	2	New Hampshire	3
Arkansas	97	New Jersey	20
California	38	New Mexico	6
Canal Zone	3	New York	149
Colorado	38	North Carolina	11
Connecticut	11	North Dakota	3
District of Columbia	25	Ohio	169
Florida	1	Oklahoma	68
Georgia	11	Oregon	9
Idaho	2	Pennsylvania	133
Illinois	828	Rhode Island	3
Indiana	197	South Carolina	11
Iowa	147	South Dakota	12
Kansas	102	Tennessee	96
Kentucky	99	Texas	79
Louisiana	35	Utah	7
Maine	2	Vermont	1
Maryland	33	Virginia	23
Massachusetts	49	Washington	10
Michigan	84	West Virginia	25
Minnesota	92	Wisconsin	52
Mississippi	15	Wyoming	1
Missouri	1,086	Foreign (including Canada)	10
Montana	8		

Practice of Medicine

Aaron, Charles D., Detroit.
Abbott, Clarence, Otwell, Ind.
Abbott, Edward H., Elcin, Ill.
Adair, T. W., Archie, Mo.
Adams, E. M., Gridley, Ill.
Adams, J. W., Carrollton, Ill.
Adles, M., Du Quoin, Ill.
Alderman, Mason C., Sedalia, Mo.
Alford, R. Lee, Vandalia, Mo.
Allee, Warren L., Elden, Mo.
Allee, W. S., Olean, Mo.
Allen, F. W., Callao, Mo.
Allen, L. M., Philadelphia.
Allen, Wesley, West Newton, Ind.
Allyn, Walter H., Waverly, Ill.
Altham Arthur G., Metz, Mo.
Althans, Carl, St. Louis, Mo.
Alvis, E. C., Kell, Ill.
Amerland, J. H., St. Louis.
Amerman, S. S., Sullivan, Ky.
Ames, H. B., Burlington, Okla.
Anderson, Elmer E., Garland, Kan.
Anderson, J. C., Granger, Texas.
Anderson, J. Howard, Marytown, W. Va.
Anderson, R. B., Sherman, Texas.
Anderson, William Edward, Farmville, Va.
Andrews, John, Grant City, Mo.
Andrews, J. P., Marionville, Mo.
Andrews, Jr., Neil, Oshkosh, Wis.
Applewhite, Lee D., East St. Louis, Ill.
Arbuthnot, Thomas S., Pittsburgh, Pa.
Armstrong, C. L., Webster Grove, Mo.
Arnold, Horace D., Boston.
Arthur, Sylvester Irvin, Patoka, Ind.
Atkins, W. A., Rogersville, Mo.
Atkinson, Jas. A., Morehouse, Mo.
Aufderheide, Wm. D., St. Louis.
Austin, R. E., San Diego, Cal.
Austin, M. B., Brunswick, Mo.
Austin, Sedgwick E., Auburn, N. Y.
Baar Gustav, Portland, Ore.
Baird, R. W., Dallas, Texas.
Baker, J. H. P., Salisbury, Mo.
Balke, W. A., Cropsey, Ill.
Baldwin, Paul, Kennett, Mo.
Ball, Otho F., St. Louis.
Bankhead, J. E., Clarksville, Mo.
Barger, J. Nelson, Albany, Mo.
Barnes, Sr., A. S., St. Louis.
Barnes, P. C., St. Louis.
Barnhart, D. A., Huntsville, Mo.
Barr, Clarence M., St. Louis.
Barringer, B. M., Emden, Ill.
Bartlett, Ezekiel M., Clarksville, Mo.
Baskett, J. N., Hannibal, Mo.
Bass, C. C., New Orleans.
Bassett, Sam T., St. Louis.
Bauer, Chas. E., St. Louis.
Baumgarten, Walter, St. Louis.
Bate, R. Alexander, Louisville, Ky.
Battle, J. T. J., Greensboro, N. C.
Baysinger, S. L., Rolla, Mo.
Beall, K. H., Fort Worth, Tex.
Beard, I. M., New Orleans.
Beatie, William R., Marshfield, Mo.
Beavers, C. E., Barry, Ill.
Beck, Harvey G., Baltimore, Md.
Becker, Ernest J., Selden, Kans.
Beeson, John P., Southwest City, Mo.
Behrens, Louis H., St. Louis.
Bell, Alfred, Brooklyn, N. Y.
Bell, John M., St. Joseph, Mo.
Bell, Seaborn B., Ozark, Ala.
Bell, William H., Decatur, Ill.
Benedict, A. L., Buffalo, N. Y.
Benker, O. H., St. Louis, Mo.
Bennett, Basil, Trenton, Tenn.
Bennett, F. W., St. Louis, Mo.
Benson, B. G. St. Louis, Mo.
Berghausen, Oscar, Cincinnati.
Berrey, Isaac Sonora, Balchtown, Ill.
Bessey, J. M., Toledo, Ohio.
Beveridge, J. W., Oregon, Ill.
Bewig, H. S., St. Louis.
Bierring, Walter L., Iowa City, Ia.
Biggs, Orvis E., Hot Springs, Ark.
Biggs, Vincent A., Martin, Tenn.
Billings, Frank, Chicago.
Bing, Elbert R., Altamont, Ill.
Birkofer, W. J., Gothenburg, Neb.
Bishop, A. M., Chicago.
Black, G. C., Table Grove, Ill.
Blackburn, Wm. R., Breeds, Ill.
Blackstone, G. R., Macomb, Ill.
Blake, W. H., Sheffield, Ala.
Blakely, James Thomas, Mt. Erie, Ill.
Blakey, Thomas W., Hopkinsville, Ky.
Blattner, Fredk. O., St. Louis.
Bland, Curtis, Greensburg, Ind.
Bland, Warren W., Vandalia, Mo.
Blankenbaker, H., Orrville, Ohio.
Blanton, Marvin A., Union City, Tenn.
Bley, George, Jr., Beardstown, Ill.
Bliss, Charles J., Centerville, Mo.
Blumer, George, New Haven, Conn.
Blythe, Vernon, Paducah, Ky.
Bobb, C. S., Mitchell, S. Dak.
Boggess, Walter F., Louisville, Ky.
Bogle, Herman H., Pittsburg, Kan.
Bohan, Peter Thomas, Kansas City, Mo.
Bohannan, H. R., Jerseyville, Ill.
Bohling, C., Sedalia, Mo.
Boisliniere, Louis C., St. Louis.
Boles, Dallas S., Herrin, Ill.
Bond, L. E., Denison, Iowa.
Bond, S. B., Ballwin, Mo.
Bonham, Vaughan Q., Fayette, Mo.
Boogher, J. Leland, St. Louis.
Bostick, Will, St. Louis.
Bosworth, O. B., Centerville, Tenn.
Bottom, E. H. East St. Louis, Ill.
Bourland, I. N., Equality, Ill.
Bourland, O. M., Van Buren, Ark.
Bowcock, C. M., Springfield, Ill.
Bowers, H. C., Scirceville, Ind.
Bowling, John W., Shawnectown, Ill.
Boyd, F. Robert, St. Louis.
Boyd, H. B., Cambridge City, Ind.
Boyd, R. L., Pembroke, Ky.
Boyers, Jacob, Decatur, Ind.
Bradford, Kenneth, Staunton, Va.
Bradley, M. M., Chatham, Ill.
Bradley, Robert H., Marshall, Ill.
Bradley, Will C., Windsor, Mo.
Bradshaw, John T., Shawnee, Okla.
Bradsher, R. Edward, Marmaduke, Ark.
Brady, Charles, Parsons, Kan.
Brainerd, E. P., Martin City, Mo.
Brandenburger, Louis A., St. Louis.
Brannan, Charles S., Albion, Ill.
Breeding, W. J., Ravenscroft, Tenn.
Bressler, A. C., Wellington, Kan.
Breuer, R. E., Newburg, Mo.
Brewer, E. M., Rantoul, Ill.
Breuer, William Hayes, St. James, Mo.
Bradly, Robert C., Peoria, Ill.
Brain, C. F., Bellmont, Ill.
Brian, J. R., St. Francisville, Ill.
Bridges, J. R., Kahoka, Mo.
Brittin, Albert L., Athens, Ill.
Brockway, Frank, Oshkosh, Wis.
Brookes, H. S., St. Louis.
Brookhart, H. H., Scammon, Kan.
Brook, Frederick C., St. Louis.
Broun, Harry R., Daykin, Neb.
Brown, Allen C., Moselle, Mo.
Brown, Charles H., Fair Play, Mo.
Brown, Everett J., Decatur, Ill.
Brown, G. F., Sherman, Tex.
Brown, George S., Edina, Mo.
Brown, J. C., Lewistown, Mo.
Brown, Orville Harry, St. Louis.
Brown, Tinsley, Hamilton, Mo.
Broyles, F. H., Bethany, Mo.
Brudi, G. G., New Haven, Ind.
Brumwall, J. D., Salisbury, Mo.
Brundage, N. E., Delphi, Ohio.
Brush, Frederic, New York.
Bruton, J. W., Ozark, Mo.
Bruton, Tyrrel S., Seymour, Mo.
Bryan, E. M., Fulton, Mo.
Bryan, Joseph Lyman, Xenia, Ill.
Bryan, R. Shepard, St. Louis.
Bryant, J. B., Lawrenceville, Ill.
Buck, E. M., Montrose, Iowa.
Buck, G. M., Burrows, Ind.
Bucklin, G. W., Muncie, Ind.
Buettner, John J., Syracuse, N. Y.
Burke, C. O., Atlanta, Ill.
Bushart, R. L., Fulton, Ky.
Butler, H. T., Union City, Tenn.
Butler, James H., Hartsburg, Ill.
Buxton, W. E., West Salem, Ill.
Cables, Henry A., E. St. Louis, Ill.
Cabot, Richard C., Boston.
Caldwell, Chas. W., Chelsea, Okla.
Calvert, W. J., Dallas, Tex.
Cameron, William H., Pittsburg, Pa.
Camp, F. K., Oklahoma City, Okla.
Campbell, Oliver H., St. Louis.
Cannady, E. W., E. St. Louis, Ill.
Cannon, Geo. Emmett, Hope, Ark.
Capel, A. B., Shawneetown, Ill.
Capps, Joseph A., Chicago.
Carbaugh, Eugene, Kansas City, Mo.
Carey, J. W., Whitesboro, Tex.
Carman, R. H., St. Louis.
Carriere, Theodore L., St. Louis.
Carson, Frank D., Benton, Ohio.
Carson, L. O., New Augusta, Ind.
Carson, R. L., Lincoln City, Ind.
Carter, A. R., Murphysboro, Ill.
Carter, Howard, Webster Groves, Mo.
Carthrae, Lewis, Corder, Mo.
Caruthers, C. K., Pine Bluff, Ark.
Casburn, Alfred Leslie, Ferris, Ill.
Cassel, Herman F., St. Louis.
Catlon, J. H., Breckenridge, Tex.
Causey, G. W., Swifton, Ark.
Cave, E. S., Mexico, Mo.
Cave, J. W., Wichita, Kan.
Chambers, H. L., Lawrence, Kan.
Chandler, J., Centerville, Mo.
Chapin, H. A., White Hall, Ill.
Chapman, A. W., Charleston, Mo.
Chapman, F. A., Sigel, Ill.
Chapman, R. R., Bridgewater, Iowa.
Chapman, S. T., Halls, Tenn.
Chapman, William Day, Silvis, Ill.
Chapman, W. Earle, Sheboygan, Mich.
Chappell, Ralph S., Indianapolis.
Charles, Etta, Summitville, Ind.
Chastain, C. H., Weston, Mo.
Chastain, P. S., Butler, Mo.
Child, Scott P., Clifton City, Mo.
Chilgren, G. A., Burlington, Iowa.
Chilton, J. A., Van Buren, Mo.
Chittum, J. D., Sorento, Ill.
Christian, Chas. H., New Bloomfield, Mo.
Christofferson, P. J., Waupaca, Wis.
Claiborn, E. G., Decaturville, Mo.
Clark, John Wheeler, Carterville, Mo.
Clark, O. P., Russell, Ky.
Clark, W. A., Jefferson City, Mo.
Clark, William J., Maysville, Mo.
Clarke, George W., Roseville, Ill.
Clarke, L. Cygne, Kan.
Claytor, Thomas A., Washington, D. C.
Cleland, James, Jr., Detroit.
Cleland, Jas. S., Swanwick, Ill.
Clendening, Logan, Kansas City, Mo.
Clothe, Wm., Tell City, Ind.
Cochran, Athel, Iuka, Kan.
Cochran, E. U., Martin City, Tenn.
Cohenour, V. J., Joliet, Ill.
Coil, Paul E., Mexico, Mo.
Coleman, Nathaniel R., Columbus, Ohio.
Coleman, Thomas D., Augusta, Ga.
Collins, J. S., Carlinville, Ill.
Condon, A. S., Ogden, Utah.
Congdon, William O., Cuba, N. Y.
Conner, Frank Howard, Nevada, Ia.
Conner, Lewis A., New York.
Connett, James Eddington, Lawrenceville, Ill.
Conover, C. C., Kansas City, Mo.
Cook, Jerome E., St. Louis.
Cook, J. H., Terre Haute, Ind.
Cooley, Halsey E., Angelica, N. Y.
Coombs, J. W., Camden, Ohio.
Coons, Jacob Jones, Columbus, O.
Corley, H. N., St. Paul, Mo.
Cottral, George H., Hanover, Ill.
Covington, E. D., Hardin, Ky.
Cox, Leo, Springfield, Mo.
Craig, T. B. M., Nevada, Mo.
Crandall, George Clinton, St. Louis.

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Crane, A. W., Kalamazoo, Mich.
Crawford, R. O., Eldorado Springs, Mo.
Crockett, James A., Stanberry, Mo.
Crockett, Sidney S., Nashville, Tenn.
Croftan, A. C., Chicago.
Cross, John Grosvenor, Minneapolis.
Crosthwaite, Geo. W., Florence, Tenn.
Croston, G. C., Sapulpa, Okla.
Crouch, H. T., Bardwell, Ky.
Crow, Oliver Lee, Assumption, Ill.
Cruse, Carl V., Iola, Ill.
Culp, A. B., Beggs, Okla.
Cummings, Harry J., St. Louis.
Custer, D. D., Philadelphia.
Daland, Judson, Philadelphia.
Dale, Chas. F., Lexington, Ky.
Dalgleish, G. D., Rockville, Mo.
Daniel, Sam G., Marshall, Ark.
Daniells, Ralph P., Toledo, Ohio.
Daniels, E. O., La Fontaine, Ind.
Davis, Albert W., Kansas City, Mo.
Davis, Homer W., Alton, Ill.
Davis, James D., Louisiana, Mo.
Davis, James H., Carlinville, Ill.
Davis, Louis H., St. Louis.
Davis, Thomas D., Pittsburg, Pa.
Davis, Wheeler, St. Louis.
Davis, W. V., Booneville, Miss.
Davidson, Albert A., Augusta, Ga.
Davidson, W. E., Kingston, Ill.
Dawson, John L., Charleston, S. C.
Dawson, N. B., Sterling, Ohio.
Deaderick, William H., Helena, Ark.
Deal, John, Riverton, Ill.
Denby, J. P., Carlinville, Ill.
DeVilbiss, Frank, Eugene, Mo.
Dew, W. A., Belleville, Ill.
DeWitt, J. P., Canton, Ohio.
Dice, Henry F., Bridge Farm, Ill.
Dickerson, G. D., Conway, Ark.
Dicks, T. A., Broadlands, Ill.
Diehl, Christian Herman, St. Louis.
Dielman, F. C., Fulton, Ind.
Dierker, Frank H., West Point, Ia.
Dierking, A. W., Oolitic, Ind.
Dillingham, Wm. Roy, Morland, Kan.
Dingle, H. A., Red Beed, Ill.
Dinsmore, Walter H., Kramer, Ind.
Dixon, Chas. H., Holliday, Mo.
Dixon, William Allen, Decatur, Ill.
Dixon, W. C., Nashville, Tenn.
Dock, George, New Orleans.
Doerr, John E., Mt. Vernon, Ind.
Donaldson, Jno. B., Canonsburg, Pa.
Donnell, B. E., Soto, Mo.
Dorris, Thos. R., Grapevine, Tex.
Doty, E. A., Oxford, Iowa.
Douglas, James T., Ferguson, Mo.
Dow, Wm. S., Indianapolis.
Dremen, C. T., Hot Springs, Ark.
Dreyfus, J. W., Louisiana, Mo.
Driskell, C. R., Farmersville, Ill.
Drummond, R. M., Russellville, Ark.
Dryden, U. G., Dublin, Mo.
Duane, J. F., Peoria, Ill.
Duchein, C. F., Baton Rouge, La.
Duey, D. R., Belleville, Ill.
Duffield, Henry C., Pittsfield, Ill.
DuFour, Walter G., Chenoa, Ill.
Dugan, Thomas J., Indianapolis.
Duncan, J. M., Pawnee, Ill.
Dunham, John Dudley, Columbus, O.
Dunigan, Jas. P., Sullivan, Mo.
Dupree, M. W., Bethel, Tenn.
Durand, Jay L., Atlantic City, N. J.
Dusenbury, C. T., Monett, Mo.
Dyer, D. P., Sedalia, Mo.
Dyer, John H., Warrenton, Mo.
Eggleston, E. L., Battle Creek, Mich.
Epler, Blanch N., Kalamazoo, Mich.
Evermann, Edward B., St. Louis.
Egan, R. E., Springhill, Kan.
Eberspacher, F. J., Pana, Ill.
Edgell, O. K., Eolia, Mo.
Edmonds, O. R., Tina, Mo.
Edwards, A. R., Chicago.
Edwards, F. M., Fairland, Okla.
Einhorn, Max, New York.
Elfrink, B. F., Chenoa, Ill.
Elkins, C. Bryant, Springfield, Mo.
Ellinger, T. J., Philadelphia.
Elliott, Charles A., Chicago.
Elliott, Edward W., Fort Morgan, Colo.
Elliott, John C., Guilford, Ind.
Ellis, Frank B., Garden City, Mo.
Elmer, Warren P., St. Louis.
Elrod, Stephen B., Henryville, Ind.
Emerson, Charles P., Clifton Springs, N. Y.
Enberg, Andrew, McPherson, Kan.
Engelbach, Theodore, Grand Isle, La.
Engelbach, William, St. Louis.
Engelman, Oscar B., St. Louis.
English, J. N., Gillespie, Ill.
Epperly, R. G., Prairie Hill, Mo.
Evans, Charles A., Bluffs, Ill.
Evans, D. J., Galesburg, Ill.
Evans, Edwin E., Columbia, Mo.
Evans, Florence L., East St. Louis, Ill.
Fairbanks, J. R., Amsterdam, N. Y.
Falk, John C., St. Louis.
Farmer, W. S., Cookville, Tenn.
Fassett, Charles Wood, St. Joseph, Mo.
Faucett, J. T., Trenton, Tenn.
Faulk, Lem, Emory, Tex.
Fear, R. C., Gardner, Kan.
Feinstein, Leon A., St. Louis.
Ferriss, J. H., Henrietta, Tex.
Fewel, R. B., Montrose, Mo.
Fiegenbaum, E. W., Edwardsville, Ill.
Fleming, Theo. F., St. Louis.
Fihe, C. C., Cincinnati.
Fildes, V. S., Parkersburg, Ill.
Firson, Charles M., Piggott, Ark.
Fischel, Walter, St. Louis.
Fischel, Washington E., St. Louis.
Fisher, C. R. P., Round Brook, N. J.
Fittro, E. B., Salem, W. Va.
Fleischaker, Frank W., Louisville, Ky.
Fleming, C. R., Farmington, Mo.
Flentje, Robert, Buffalo, Ill.
Fletcher, F. D., Chatham, Ill.
Fletcher, J. S., Winchester, Ill.
Flint, O. J., Princeton, Ill.
Floyd, R. G., Eureka Springs, Ark.
Fontaine, Bryce W., Memphis, Tenn.
Forbes, D. M., Okmulgee, Okla.
Ford, Charles, Waukegan, Ill.
Ford, Karl Bernard, Wichita, Kan.
Foreman, C. B., Kane, Ill.
Foreman, C. O., Warrenton, Mo.
Forsyth, Robert C., Kirkwood, Mo.
Fortney, F. D., Newburg, W. Va.
Foster, T. W., Butler, Mo.
Foster, W. S., Pittsburg, Pa.
Fountain, J. H., Chapin, Ill.
Foxworthy, Frank W., Indianapolis.
Frantz, D. W., Metcalf, Ill.
Frazer, Thompson, Asheville, N. C.
Freeman, Elmer B., Baltimore, Md.
Freeman, Edward D., Osgood, Ind.
Freund, Hugo A., Detroit, Mich.
Frick, Anders, Chicago.
Friedemann, Paul, Stillwater, Okla.
Friedenwald, Julius, Baltimore.
Fries, William A., St. Louis.
Frizzell, Thomas D., Quanah, Tex.
Fronske, Martin G., St. Louis.
Frost, E. L., Buffalo, N. Y.
Fulbright, J. H., Springfield, Mo.
Fuller, J. A., Lane, Kan.
Fulton, Arthur Leonard, St. Louis.
Fulton, Frank H., Pittsburg, Mo.
Funk, David S., Harrisburg, Pa.
Gaertner, C. Walter, St. Louis.
Gailey, Darwin S., Ashland, Ill.
Gaines, J. R., Musselfork, Mo.
Galbreth, W. H., Rockfield, Ind.
Gallagher, J. C., Valley Park, Mo.
Gapen, Clarke, Madison, Wis.
Gaston, J. Irwin, Kingston, Okla.
Geier, Otto P., Cincinnati.
Geitz, Henry A., St. Louis.
Gerhard, Samuel P., Philadelphia.
Gibson, A. Gilden, Morrisonville, Ill.
Gibson, Charles M., Franklin, Kan.
Gibson, Elijah T., Louisville, Ill.
Gibson, James P., Stewartsville, Ind.
Gibson, O. N., Eldorado, Ill.
Griffin, H. Z., Rochester, Minn.
Gilbert, A. J., Hillsboro, Tex.
Gillespie, J. F., Greencastle, Ind.
Gilleatt, O. E., Allendale, Ill.
Glahn, C. P., Palmyra, Mo.
Glascock, E. N., Mill Shoals, Ill.
Glasgow, Edward A., Mulberry Grove, Ill.
Gleaves, O. G., St. Joseph, Mo.
Goar, C. S., Indianapolis.
Godfrey, George B., St. Louis.
Goebel, Arthur, St. Louis.
Goins, George W., Breckenridge, Mo.
Gooch, W. S., Mapleton, Mo.
Good, Clarence A., St. Joseph, Mo.
Goodier, Robert H., Hannibal, Mo.
Gordon, R. E., El Paso, Ill.
Gordon, T. B., Carlin, Ill.
Gore, Charles P., Lawrenceville, Ill.
Gossow, A. A., St. Charles, Mo.
Gourley, W. W., Fulton, Ky.
Gove, Herman S., Linn, Mo.
Graber, F. J., Stockport, Iowa.
Grady, N. H., Monette, Ark.
Gray, R. Q., St. Louis.
Gray, S. T., Alfa, Iowa.
Green, D. E., Pleasanton, Kan.
Greenfelder, Harry, St. Louis.
Greer, E. O., St. Louis.
Gregory, Walter E., Dansville, N. Y.
Griffin, R. W., Tiptonville, Tenn.
Griffith, A. Comings, Kansas City, Mo.
Grimmer, C. Fred, Pekin, Ill.
Grosse, L. W., St. Louis.
Groves, J. E., Urichsville, Ohio.
Guhman, M. G., St. Louis.
Guibor, F. E., Maplewood, Mo.
Gunn, A. J., Versailles, Mo.
Guss, William C., Hannibal, Mo.
Guthrie, J. B., New Orleans.
Haass, E. W., Detroit.
Hahn, F., Leetonia, Ohio.
Hale, Jesse W., Greenville, Mo.
Hale, T. H., Fall River, Kan.
Haley, O., Fredericktown, Mo.
Hall, Edward M., Delaware, Ohio.
Hall, Herbert J., Marblehead, Mass.
Hall, Joseph, Westfield, Ill.
Hall, J. N., Denver.
Hall, O. B., Warrensburg, Mo.
Hall, W. Antoine, St. Louis.
Halliburton, W. W., Alton, Ill.
Halsey, Luther M., Williamstown, N. J.
Hamel, E. B., Hastings, Neb.
Hamilton, L. O., Roodhouse, Ill.
Hamilton, Robert L., Richmond, Mo.
Hamilton, William T., Philadelphia.
Hampton, J. R., Clinton, Mo.
Hanford, Frank W., Rockford, Ill.
Hangen, W. M., St. Louis.
Hardy, Joseph, St. Louis.
Hardy, J. J., Poteau, Okla.
Hardy, J. W., Sumner, Mo.
Hardman, W. B., Commerce, Ga.
Hargis, W. A., Hermitage, Tenn.
Harlan, L. O., Madison, Ill.
Harlan, W. E., St. Louis.
Harnisch, H. J., St. Louis.
Harris, B. W., Georgetown, Mo.
Harris, Seale, Mobile, Ala.
Harris, J. F., Mexico, Mo.
Harrower, Henry R., Chicago.
Hartman, Frank T., Waterloo, Iowa.
Hartmann, J. A., St. Louis.
Hartwell, D. D., Marion, Ill.
Harvey, J., Grigsville, Ill.
Harwood, William S., Rensselaer, Mo.
Hastings, J. Barnard, Alton, Ill.
Hatchett, John A., El Reno, Okla.
Hauck, Eugene F., St. Louis.
Hauck, Louis, St. Louis.
Hauck, S. L., Ottumwa, Iowa.
Haw, Uriel P., Benton, Mo.
Hawley, Jesse O. S., St. Louis.
Hayden, A., Shullsburg, Wis.
Haynes, Lee, Mendota, Mo.
Haynes, W. A., Sabetha, Kan.
Hays, Benjamin, Jackson, Mo.
Hays, T. A., Burns City, Ind.
Hays, Woodward, Albion, Ind.
Hearst, W. L., Cedar Falls, Iowa.
Heely, O. J., St. Libary, Ill.
Hegge, C. A., Austin, Minn.
Held, Henry W., Vincennes, Ind.
Hempelmann, L. H., St. Louis.
Henderson, A. G., Leonardville, Kan.
Henderson, Charles Forest, McCurtain, Okla.
Henderson, E. L., Louisville, Ky.
Hendricks, W. W., Bordolph, Ill.
Henke, J. R., St. Louis.
Henry, W. H., Hamden Junction, O.
Henske, Andrew C., St. Louis.
Henslin, A. E., Leroy, Minn.
Herbert, T. H., Lebanon, Mo.
Herchenroeder, Louis C., St. Louis.
Herr, Henry, Washington, Ind.
Herrick, James B., Chicago.
Heuman, G. W., St. Louis.
Heyer, Chas., St. Louis.
Hick, John C., Eldorado, Ill.
Hickerson, Edwin R., Moberly, Mo.
Hickerson, J. T., Independence, Mo.
Hickerson, J. T., Centralia, Mo.
Hickin, Frank W., Cleveland.
Hicks, Grant S., Tacoma, Wash.
Hiestand, Clement V., Merrimac, Ky.
Higdon, E. E., Allenville, Mo.
Hill, Charles Edgar, E. St. Louis, Ill.
Hill, Emma L., Oswego, Kan.
Hill, L. E., Hannibal, Mo.
Hill, L. B., Seymour, Ind.
Hilliard, T. J., Fairfield, Ill.
Hinch, F. E., Ste. Genevieve, Mo.
Hirsch, J. A., Edwardsville, Ill.
Hirschi, Wm. T., St. Louis.
Hoagland, Charles C., Veblen, S. Dak.
Hockdoerfer, D. Y., St. Louis.
Hoefler, J. P., St. Louis.
Hoch, George L., Fort Collins, Colo.
Hoffman, Paul M., Tipton, Iowa.
Hogue, John A., Jr., Holcomb, Mo.
Hoiby, Chas. O., Chicago.
Holbrook, R. W., Perkins, Okla.
Holcomb, O. W., St. Paul, Minn.
Holdenried, Wm. E., St. Louis.
Holder, R. E., Columbus, Ind.
Holland, A. B., Wellsville, Ohio.
Holland, Thos. E., Hot Springs, Ark.
Hollis, Luther T., Kansas City, Mo.
Holtgrewe, Frederick W., St. Louis.
Hoover, C. F., Cleveland.
Hopkins, Ross, St. Louis.
Hopkins, W. S., Bolivar, Mo.
Horner, Joseph S., Hot Springs, Ark.
Hornsby, John A., Chicago.
Horstman, H. G., Vergennes, Ill.
Horwitz, Maximilian R., St. Louis.
Horwitz, Sandor, Peoria, Ill.
House, Charles F., Hastings, Okla.
House, Charles F., Painesville, O.
Howard, Wm. N., Cape Girardeau, Mo.
Howell, Dumont D., Nowata, Okla.
Hoy, B. F., Syracuse, Ind.
Hubly, Charles C., New Windsor, Ill.
Hudson, Thos. F., Luxora, Ark.
Hughes, G. W., Armstrong, Ill.
Hughes, H. L., Hardin, Ky.
Hughson, F. L., Centralia, Okla.
Hulen, J. C., Centralia, Mo.
Hume, Charles R., Anadarko, Okla.
Hume, E. L., Bourbon, Mo.
Hurst, Jas. A., Pennington Gap, Va.
Hurst, S. T., Greenview, Ill.
Hutton, W. S., Fornfelt, Mo.
Ilg, Theodore, St. Louis.
Iralson, Abe, St. Louis.
Irons, Ernest E., Chicago.
Isbell, John, Washington, Mo.
Jack, Cecil M., Decatur, Ill.
Jacobs, Benjamin, Kansas City, Mo.
Jacobson, Jacob, St. Louis.
Jackson, J. B., Hopkinsville, Ky.
Jackson, O. H., Meadville, Pa.
Jackson, T. J., St. Charles, Mo.
Jackson, W. Z., Arlington, Ky.
James, Edwin F., Springfield, Mo.
James, J. M., Fleming, Ill.
James, Samuel C., Kansas City, Mo.
Jennings, Robert J., Windsor, Mo.
Jensen, N. N., Florissant, Mo.
Jester, Homer B., Corsicana, Tex.
Jezdinik, J. Jenrink, Prairie View, Kan.
Jewett, H. S., Dayton, Ohio.
Johnson, J. E., Lebanon Junction, Ky.
Johnston, C. H., Lexington, Tenn.
Jones, Allen A., Buffalo, N. Y.
Jones, Clement R., Pittsburg, Pa.
Jones, D. T., Memphis, Tenn.
Jones, I. D., Cincinnati.
Jones, Joshua T., Salem, Ill.
Jones, Leroy, Hoopeston, Ill.
Jones, Owen S., Fort Smith, Ark.
Jordan, James C., Des Moines Ia.
Joy, L. Fowler, Fulton, N. Y.
Jump, David W., Plainfield, Ill.
Junghuhn, H. C., Tripoli, Iowa.
Kalbfleisch, A. C., Peru, Ind.
Kampschmidt, A. W., Columbia, Mo.
Kassabian, Nushan H., Coopersville, Mich.
Kaylor, E. B., Barry, Ill.
Keen, L. O., Burkesville, Ky.
Kleith, J. T., Sturgeon, Mo.
Keller, Alvin, Cardiff, Ill.
Kelly, Joseph C., Philadelphia.
Kelly, P. M., Litchfield, Ill.
Kelso, R. S., Joplin, Mo.
Kemp, C. H., Lacon, Ill.
Kemper, G. W., Muncie, Ind.
Keogh, John V., Dubuque, Iowa.
Kern, J. H., St. Louis.
Kerr, E. D., Westervelt, Ill.
Kerr, H. L., Sparta, Mo.
Kerr, W. B., Dudley, Mo.
Kerrick, C. L., Chrisman, Ill.
Kerrick, H. C., Brocton, Ill.
Kerrigan, John J., Michigan City, Ind.
Kesl, George M., St. Louis.
Kessler, E. H., St. Louis.
Kimberlin, A. C., Indianapolis.
Kincaid, Thomas, Galesburg, Ky.
Kirby, Wm. G., Chicago.
Kirk, T. T., Pittsburg.
Kleckner, Ralph E., Mattoon, Ill.
Keir, Charles, St. Louis.
Knappenberger, T. G., Chicago.
Knight, Arthur L., Cincinnati.
Knott, Isaiah, Keytesville, Mo.
Knox, Andrew C., Kansas City, Mo.
Knox, W. T., Mancester, Ill.
Koch, Otto W., Ballwin, Mo.
Konzelman, P. R., St. Louis.
Koontz, Carl J., St. Louis.
Krehbiel, C. H., St. Louis.
Krebs, Paul H., Cleveland.
Kreidler, A. G., Cincinnati.
Kring, C. H., Bellerive, Ill.
Kroeger, Geo. H., St. Louis.
Krug, Fred. H., St. Louis.
Kuhlmann, Frederick C. E., St. Louis.
Lacy, L. S., Pittsfield, Ill.
Laird, William R., Auburn, N. Y.
Lamb, J. G., Fisher, Ill.
Lambert, Alexander, New York.
Landaker, Chester L., Collins, Mo.
Lang, John H., Centertown, Mo.
Lange, Sidney, Cincinnati.
Lare, H. L. P., St. Louis.
Larkin, J. C., Hillsboro, Ohio.
Larrabee, F. C., Alton, Ill.
Laughlin, E. O., Paris, Ill.
Lawry, Carl C., Earlville, Ill.
Lea, Jesse W., Jackson, La.
Lebrecht, John C., St. Louis.
Lee, Elbert J., Sr., Norborne, Mo.
Lee, Jas. R., Columbus, Ky.
Lee, Roger I., Boston.
Lemann, Isaac Ivan, New Orleans.
Lence, John J., Jonesboro, Ill.
Leroy, Louis, Memphis, Tenn.
Le Saulnier, Herman Louis, Red Bud, Ill.
Leslie, C. B., Meade, Kan.

Levison, Louis A., Toledo, Ohio.
Lewis, Chas., St. Louis.
Lewis, C. M., Bridgeport, Ill.
Lewis, H. Edwin, New York.
Lewis, J. R., Ripley, Tenn.
Lichty, John A., Pittsburg, Pa.
Lichty, M. J., Cleveland.
Lillie, C. W., East St. Louis, Ill.
Lindsay, John C., Chicago.
Lindsey, L. N., Forsyth, Ill.
Linvill, Swan, Columbia City, Ind.
Lippert, J., East St. Louis, Ill.
Lipsitz, S. T., Gilman.
Leston, Joseph Bastic, Shipman, Ill.
Litchfield, Lawrence, Pittsburg, Pa.
Little, Homer M., East St. Louis, Ill.
Little, R. M., East St. Louis, Ill.
Little, Wilbur T., Canon City, Colo.
Little, W. T., Calvert City, Ky.
Lockwood, E. K., Virden, Ill.
Lomas, Willis A., Williston, Iowa.
Long, Joseph M., St. Louis.
Long, L. S., St. Joseph, Mo.
Love, William S., Bertrand, Mo.
Lowery, Allen, Blackwell, Okla.
Luckett, Chas. D., English, Ind.
Lukemeyer, Edward G., Huntingburg, Ind.
Luman, F. E., Baring, Mo.
Lutton, L. S., St. Louis.
Lyles, A. R., Virginia, Ill.
Lyon, A. K., Pittsburg, Pa.
Lyon, George E., Mowcaqua, Ill.
Lyon, Geo. E., St. Louis.
McKenzie, Wm. R., Chester, Ill.
Macon, R. B., Clarksville, Tenn.
MacQueen, D. K., Laurium, Mich.
MacRae, John, Calumet, Mich.
Madden, J. H., Colorado Springs, Colo.
Madry, A. H., Aurora, Mo.
Mairs, R. H., Ill.
Mandell, A. H., New Bedford, Mass.
Mangus, C. W., Moberly, Mo.
Mann, A. H., Oak Grove, Mo.
Manning, D. F., Marshall, Mo.
Manning, W. J., Cleveland.
Marder, J. L., St. Louis.
Mardorf, Wm. C., St. Louis.
Markley, M. W., Pennville, Ind.
Martin, E. H., Hot Springs, Ark.
Martin, F. A., Tower Hill, Ill.
Martin, Henry L., Kansas City, Mo.
Martin, J. A., Palestine, Ill.
Martin, W. F., Battle Creek, Mich.
Martin, W. T., Albany, Mo.
Marvel, Philip, Atlantic City, N. J.
Mason, J. S., Urbana, Ill.
Mason, Wm. M., Hazel, Ky.
Matlock, J. W., Frost, Tex.
Matthews, F. H., Liberty, Mo.
Matthews, J. C., Springfield, Mo.
Matthews, John Palmer, Carlinville, Ill.
Mattox, Ernest L., West Terre Haute, Ind.
Mattox, W. R., Terre Haute, Ind.
Maxwell, Allison, Indianapolis.
Maxwell, J. B., Mt. Carmel, Ill.
May, Leon J., Cobden, Ill.
Mayberry, F. E., Dorchester, Mass.
Mayes, F. S., St. Louis.
McAnally, J. T., Carbondale, Ill.
McBratney, E. W., St. Louis.
McCall, W. K., Worcester, Mo.
McCaskery, G. W., Fort Wayne, Ind.
McClure, E. C., Busey, Iowa.
McClymonds, J. T., Lexington, Ky.
McCollam, James A., Uhrichsville, Ohio.
McComb, C. F., Duluth, Minn.
McConkey, C. M., Lathrop, Mo.
McCormick, Frank L., Huntsville, Mo.
McCoy, John H., St. Joseph, Mo.
McCray, Orville, Miamsburg, Ohio.
McCrea, F. M., Eddyville, Iowa.
McCreary, Jacob C., Cave City, Ky.
McCrimmon, F. W., Butte, Mont.
McCullough, J. Y., Casey, Ill.
McCurry, W. T., Texarkana, Ark.
McDonald, Jas. T., Mattoon, Ill.
McDonald, W. H., Clarksville, Tex.
McElroy, Jas. B., Memphis, Tenn.
McFaul, Wm. D., Miles, Iowa.
McGaubey, J. H., White Cloud, Kan.
McGavran, Charles N., Columbus, O.
McGrath, W. J., Elkader, Iowa.
McIlvaine, Thos. M., Peoria, Ill.
McKean, George E., Detroit.
McKennie, R. E., Gilman, Ill.
McMahon, M., Palmyra, Ill.
McMichael, Austin, Rockport, Mo.
McMichael, O. H., Vernon Center, Minn.
McMurry, Marvin C., Paris, Mo.
McNay, A. L., Pacific, Mo.
McNutt, I. N., Pevely, Mo.
McNutt, W. B. A., Monroe City, Mo.
McVay, L. C., Marion, Ark.
Mead, Kate C., Middletown, Conn.
Medling, W. L., Dyer, Tenn.
Mefford, W. T., Chicago.
Meinhard, J., St. Louis.
Meirink, B. J., Germantown, Ill.
Melton, W. A., Jr., Warrensburg, Ill.
Mehler, F. C., New London, Iowa.
Menefee, B. F., Jonesburg, Mo.
Mercer, William H., Pittsburg, Pa.
Meredith, A. L., Woodbridge, Mo.
Mershon, Glenn E., Mt. Carmel, Ill.
Merwin, Edgar G., Highland, Ill.
Merz, Adolph, St. Louis.
Meskar, Geo. H., Olivia, Minn.
Metcalf, H. L., Springfield, Ill.
Meyer, Grant, Lincolnville, Kan.
Meyer, Harry H., St. Louis.
Miles, Horine, Webster Groves, Mo.
Millar, R. C. M., Forestell, Mo.
Miller, A. B., Macon, Mo.
Miller, DeWitt Clinton R., Mason and Dixon, Pa.
Miller, G. D., Logansport, Ind.
Miller, John H., Pana, Ill.
Miller, John J., St. Louis.
Miller, Joseph A., Chicago.
Miller, R. M., Bogard, Mo.
Miller, Thomas C., Ash Grove, Mo.
Millhon, Homer B., Owaneco, Ill.
Mills, O. P. M., Grant City, Mo.
Mills, R. Walter, Webster Groves, Mo.
Milnanow, J. T., Chicago.
Milner, James, Winchester, Ill.
Mitchell, A. W., Humansville, Mo.
Mitchell, J. M., Oblong, Ill.
Mitchell, W. C., Bradford, Ill.
Moore, Charles, Advance, Mo.
Moon, Edward, Cape Girardeau, Mo.
Moore, G. W., Munger, Mich.
Moore, Harry M., St. Louis.
Moore, J. P., Yazoo City, Miss.
Moore, Roy Dudley, Olivette, Mo.
Moore, William G., St. Louis.
Moorehead, W. H., Stuttgart, Ark.
Montgomery, J. S., Milan, Mo.
Morgan, D. A., Nilwood, Ill.
Morgan, E. E., Fort Wayne, Ind.
Morgan, Thomas Wardsill, Virden, Ill.
Morgner, Omar, St. Charles, Mo.
Morrell, M. P., St. Louis.
Morrison, D. A., Buffalo, N. Y.
Morrison, Hugh T., Jr., Springfield, Ill.
Morrison, Lon C., Hurricane, W. Va.
Morse, F. L., St. Louis.
Morrow, E. O., Canton, Ohio.
Morton, D. F., Taylorville, Ill.
Morton, R. J., Green, Kan.
Mosby, C. D., St. Louis.
Mosby, William L., Bardwell, Ky.
Mott, W. H., Farmington, Iowa.
Moyer, S. R., Monroe, Wis.
Mudgett, John H., Philadelphia.
Mueller, Ernst, St. Louis.
Mueller, George L., St. Louis.
Mulky, Carl, Knoxville, Iowa.
Mulligan, Wesley T., Rochester, N. Y.
Muns, George E., Montgomery City, Mo.
Munson, Samuel Edgar, Springfield, Ill.
Murlin, W. W., Patoka, Ill.
Murphy, Franklin E., Kansas City, Mo.
Murphy, F. T., Brinkley, Ark.
Murphy, R. Brent, St. Louis.
Murray, Warren L., Springfield, Ill.
Musser, Charles W., Metz, Mo.
Musser, John H., Philadelphia.
Myer, Jesse S., St. Louis.
Myers, G. T., Mud Creek, Mo.
Myers, Isaac N., Maples, Ind.
Myers, R. E., Kemp, Tex.
Myers, William T., Aldrich, Mo.
Nagle, P. E., Billings, Mo.
Neblett, L. L., Stanton, Tenn.
Neblett, S. E., Southside, Tenn.
Neff, Robert L., Joplin, Mo.
Nelson, C. S., Springfield, Ill.
Nelms, J. N., Cave City, Ky.
Neuhoff, F., St. Louis.
Newcomb, Arthur T., Pasadena, Cal.
Newcomb, W. K., Champaign, Ill.
Newman, W. T., Independence, La.
Nichols, Fred C., El Paso, Ill.
Nickell, L. O., Maud, Mo.
Nickerson, L. H. A., Quincy, Ill.
Nicks, Harry G., St. Louis.
Nieburgge, H. E., St. Louis.
Niehuss, H. H., Wesson, Ark.
Nifong, William, Fredericktown, Mo.
Nixon, Madison G., Columbia, Ill.
Noble, Harry S., St. Marys, Ohio.
Noble, Nellie S., Des Moines, Iowa.
Nobles, Charles D., Buncombe, Ill.
Norfleet, Carl, Somerset, Ky.
Norment, Henry T., Henderson, Ky.
Nossaman, A. J., Pagosa Springs, Colo.
Nyberg, Robert B., Harrisburg, Ill.
Obermeyer, A. E., Jacksonville, Ill.
O'Brien, Leo F., Sappington, Mo.
Obrock, L. D., St. Louis.
O'Connor, Bernard J., Louisville, Ky.
Ogram, A. J., Jacksonville, Ill.
Ohail, Joseph C., Pittsburg, Pa.
Oliver, L. B., Sigourney, Iowa.
Olmstead, D. S., Millersburg, Ohio.
Olmstead, Russel T., Milan, Ind.
Omer, Wm. J., Thomas, Okla.
O'Reilly, William, Glasgow, Ill.
Osborn, J. F., St. Joseph, Mo.
Osborn, Samuel, Lansing, Mich.
Otis, Frank J., Moline, Ill.
Owen, John R., Arlington, Ky.
Owens, Alfred E., Princeton, Ill.
Owens, Richard J., Mill Spring, Mo.
Owens, William T., Mount Clare, W. Va.
Packer, J. A., Selma, La.
Padberg, Louis R., St. Louis.
Page, A. C., Des Moines, Iowa.
Palmer, Elbert A., Saratoga Springs, N. Y.
Palmer, Marlin J., Beardstown, Ill.
Parish, O. F., Grinnell, Iowa.
Parker, William, Mound Sterling, Ill.
Parker, George, Peoria, Ill.
Parks, A. L., Beardstown, Ill.
Parsons, I. U., Malvern, Iowa.
Patek, Arthur J., Milwaukee, Wis.
Patterson, William R., Tipton, Mo.
Paul, E. W., Forest City, Ill.
Paulson, David, Hinsdale, Ill.
Payne, John Howard, Louisville, Ohio.
Peacock, A. L., Grimes, Iowa.
Peacock, Sam R., Baylis, Ill.
Pearson, Donnell M., Louisiana, Mo.
Peck, John H., Iowa City, Iowa.
Pendergraft, William C., Hollis, Okla.
Perry, W. H., Carterville, Ill.
Peterman, A. L., Parker, S. Dak.
Peters, B. F., Greenfield, Ind.
Peters, J. A., Oxford, Iowa.
Peters, M. L., Cameron, Mo.
Petty, Wallace S., Rutledge, Mo.
Pfeffer, Peter A., St. Louis.
Phillips, G. H., Pawnee, Okla.
Philp, W. H., St. Francis, Ark.
Pigman, S. C., Concordia, Kan.
Pilkhiad, A. J., Lindsborg, Kan.
Pile, O. F., Memphis, Mo.
Pinckard, J. A., Atwood, Ill.
Pipkin, Walter D., Excello, Mo.
Pittman, John C., Norwood, Mo.
Pitner, T. J., Jacksonville, Ill.
Podlewski, S. J., Steubenville, Ohio.
Pohlmann, F. L., St. Louis.
Pollock, Avon S., Big Sandy, Tex.
Pomeroy, F. S., Chardon, Ohio.
Poole, A. R., Milan, Mo.
Poos, G. H., Summerfield, Ill.
Pope, C. H., St. Louis.
Pope, Rolla D., Du Quoin, Illl.
Porter, David R., Kansas City Mo.
Porter, H. L., Seneca, Mo.
Porter, James A., Ripley, Tenn.
Porter, John R., Knob Noster, Mo.
Porterfield, Elmo P., St. Louis.
Porterfield, William Lowrie, Chicago.
Posner, Edward R., Des Moines, Ia.
Potter, George M., Shelby, Neb.
Potter, Theodore, Indianapolis.
Potter, Will H., Niagara Falls, N. Y.
Powell, E. A., Cleveland.
Powell, J. T., Maysville, Ark.
Pratt, Joseph H., Boston.
Price, D. T., Booneville, Miss.
Price, Joseph, Columbus, Ohio.
Priestley, James Taggart, Des Moines, Iowa.
Pritchett, G. L., Fairbury, Neb.
Proctor, John M., Hot Springs, Ark.
Purves, G. K., Wichita, Kan.
Rafter, James, Huntsville, Mo.
Ragsdale, Thomas J., Lees Summit, Mo.
Raines, Robert F., Red Cloud, Neb.
Ramsbrock, C. R., Huntingburg, Ind.
Rankin, B. S., Tunnelton, W. Va.
Rathbun, Frank D., New Windsor, Ill.
Rawlings, C. L., New Harmony, Ind.
Ray, W. B., Glasgow, Ky.
Rayhill, C. G., Belleville, Ill.
Rayner, H. W., What Cheer, Iowa.
Read, Frederick B., Osceola Mills, Pa.
Reagan, R. M., Judson, Ind.
Reagor, F. B., Shelbyville, Tenn.
Reber, Robert L., St. Louis.
Reed, John H., Logansport, Ind.
Rehfeldt, Charles Sixtus, St. Louis.
Reid, Charles, Carona, Kan.
Reid, David W., Jacksonville, Ill.
Reid, John D., Pilger, Neb.
Reis, Henry, Jr., Belleville, Ill.
Rennie, Wesley H., Washington, D. C.
Replogle, J. R., Udell, Iowa.
Reynolds, D. M., Clayton, Ind.
Rhodes, O. M., Bloomington, Ill.
Rice, D. H., Colorado Springs, Colo.
Rice, Ollie W., Alderson, Okla.
Richards, A. F., Sparta, Tenn.
Richards, Raymond G., St. David, Ill.
Richardson, W. D., Centralia, Ill.
Richter, George, St. Louis.
Ridgway, William F., Atlantic City, N. J.
Riely, Lea A., Oklahoma City, Okla.
Ring, Frank, St. Louis.
Ristine, Warren H., Crawfordsville, Ind.
Ritter, John, Chicago.
Rivard, G. J., Assumption, Ill.
Roane, J. Q., Carlyle, Ill.
Robb, Winifred A. Yelton, Newton, Ill.
Roberts, Edwin E., Mount Erie, Ill.
Robertson, J. M., Bunceton, Mo.
Robinson, A. C., St. Louis.
Robinson, John L., Kansas City, Mo.
Robinson, S. T., Edwardsville, Ill.
Rochester, Delancey, Buffalo, N. Y.
Rockbill, C. S., Cincinnati.
Rodes, W. R., Mexico, Mo.
Rodman, Wm. E., Hodgenville, Ky.
Rohlfing, Arthur H., St. Louis.
Rohlfing, Charles G., St. Louis.
Rohlfing, Henry A. L., St. Louis.
Rosborough, J. L., Senatobia, Miss.
Roselle, Thos. A., Palmyra, Mo.
Rosenberger, F. E., Grandfield, Okla.
Rosenow, Edward C., Chicago.
Rosewater, Nathan, Cleveland.
Ross, Charles C., Clarion, Pa.
Ross, H. R., Sterling, Kan.
Rothwell, C. A., Mexico, Mo.
Rothwell, John H., Liberty, Mo.
Rouse, L., Painesville, Ohio.
Rowe, H. J., Willow Springs, Mo.
Roy, Frank K., Clarence, Mo.
Roy, Philip S., Washington, D. C.
Ruck, Edwin Ruck, Asheville, N. C.
Rucker, Marvin Pierce, Manchester, Va.
Runyon, F. J., Clarksville, Tenn.
Ruppert, P. C., Elgin, Ill.
Rush, Andrew A., Greenville, O.
Rusk, Jno. A., Gray Summit, Mo.
Russell, J. J., Deepwater, Mo.
Russell, R. L., Humansville, Mo.
Rutherford, Joslin, Peoria, Ill.
Ruyle, Henry J., Springfield, Mo.
Ryall, George N., Wooster, Ohio.
Ryan, Granville N., Des Moines, Ia.
Sale, Edwin, St. Louis.
Salter, John C., St. Louis.
Sample, John Thomas, Saginaw, Mich.
Sanders, Claude J., Ashley, Ill.
Sanders, Jno. F., Blytheville, Ark.
Sanders, S. F., Holdrege, Neb.
Sanders, W. E., Alta, Iowa.
Sargent, Oscar F. L., Lawrence, Mass.
Sawhill, Wm. F., Concordia, Kan.
Sawyer, John P., Cleveland.
Schaub, Chas. W., St. Louis.
Schisler, Edwin, St. Louis.
Schneck, S. W., Mt. Carmel, Ill.
Scholz, Phil, St. Louis.
von Schrader, A., St. Louis.
Schrader, Bridgeport, Ill.
Schraeder, S. P., Nashville, Ill.
Schreifels, Leonard, Granite City, Ill.
Schreve, Elmer F., Mascoutah, Ill.
Schuchat, W. Louis, St. Louis.
Schulz, F. M., Wauwatosa, Wis.
Schuman, O. V., Columbia City, Ind.
Scott, Frank C., Adrian, Ill.
Scott, John Nesbit, Kansas City, Mo.
Scott, Ralph R., Venice, Ill.
Scott, Walter E., Adel, Iowa.
Scruggs, J. P., Lenox, Iowa.
Salter, Allen, Lena, Ill.
Sears, Chas. E., Wallace, Idaho.
Seely, Lee, Ind., Ind.
Seever, Albert E., St. Louis.
Sewing, Arthur H., St. Louis.
Shafer, Frank M., Edgerton, Mo.
Shaffer, Carl J., Carson, Iowa.
Shallenberger, W. E., Canton, Ill.
Shanklin, Benjamin, St. Louis.
Shannon, J. D., Greenfield, Tenn.
Sharp, W. L., Slater, Mo.
Shattinger, Charles, St. Louis.
Shattuck, George Cheever, Boston.
Shaw, J. W., St. Louis.
Sheahan, E. L., St. Louis.
Sheets, M. E., St. Louis.
Sheldon, Charles Stuart, Madison, Wis.
Sherman, Paul, Shawneetown, Ill.
Shirley, H. W., Shoals, Ind.
Shoat, F. A., Veedersburg, Ind.
Shobe, H. G., Jefferson City, Mo.
Shore, John Paul Jones, Sailor Springs, Ill.
Shuttee, H. C., West Plains, Mo.
Sieving, H. J. C., St. Louis.
Sifford, W. R., Nashville, Tenn.
Silcox, J. Evart D., Rio, Ill.
Simon, Sidney K., New Orleans.
Simonton, Thomas Grier, Pittsburg, Pa.
Sims, J. Morgan, Collinsville, Ill.
Sisson, E. R., Greenfield, Ind.
Skaggs, Charles S., East St. Louis, Ill.
Slaughter, A. W., Green Bay, Wis.

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Sloan, Arthur N., Sioux City, Iowa.
Sloan, Robert T., Kansas City, Mo.
Sloss, Herbert J., Meade, Kan.
Smiley, Thomas B., Mt. Vernon, S. Dak.
Smith, Arthur B., Wellington, O.
Smith, C. G., Red Bud, Ill.
Smith, William H., Boston.
Smith, C. J., Pendleton, Ore.
Smith, Edward, Jr., St. Louis.
Smith, E. Franklin, New York.
Smith, Geo. S., Liberal, Kan.
Smith, Henry S., Ishpeming, Mich.
Smith, J. Atkinson, St. Louis.
Smith, J. D., Shelbina, Mo.
Smith, John Kirby, Fredericktown, Mo.
Smith, Louis J., Percy, Ill.
Smith, L. T., Newton, Kan.
Smith, R. O., Pittsburg, Ill.
Smith, Samuel A., Annapolis, Ill.
Smith, William Haile, Hondo, Tex.
Smith, Wm. M., Springfield, Mo.
Smith, Webster S., Dayton, Ohio.
Smithies, Frank, Ann Arbor, Mich.
Snider, S. J., Courtland, Kan.
Sogge, Ludwig, Windom, Minn.
Solliday, M. H., Taylorville, Iowa.
Somes, Joseph F., Vincennes, Ind.
Sorrells, C. C., Royse City, Tex.
Soule, C. E., Beardstown, Ill.
Southard, Daniel B., Mt. Vernon, Ky.
Sowder, Chas. R., Indianapolis.
Spach, A. B., Chicago.
Sparks, J. E., Crockett, Ark.
Sprecher, Daniel B., Sykesville, Md.
Spowls, J. N., Claysville, Pa.
Stacy, George Herbert, Jacksonville, Ill.
Stahl, S. S., Franklin, Ohio.
Standly, Edmond D., Brookfield, Mo.
Standly, Z. T., Laclede, Mo.
Stanoff, Chicago.
Stanger, G. H., Boone, Iowa.
Stanley, A. C., Tillar, Ark.
Stanley, J. B., Memphis, Tenn.
Stanton, P., Hamilton, Ohio.
Statler, Will K., Oakridge, Mo.
Stearns, Melvin J., Ogdensburg, N. Y.
Stedman, S. M., Versailles, Ky.
Steele, Andrew J., Chester, Ill.
Steele, R. G., Melmore, Ohio.
Steele, W. E., Carthage, Mo.
Steely, Geo. W., Louisville, Ill.
Stein, Chas., Glasco, Kan.
Stericker, George F., Springfield, Ill.
Stern, Heinrich, New York.
Stewart, J. C., Anna, Ill.
Stewart, John H., Jr., Exeter, Ill.
Stewart, W. Blair, Atlantic City, N. J.
Stickney, Victor H., Dickinson, N. Dak.
Stiers, Fred L., East Peoria, Ill.
Stocking, L. C., St. Louis.
Stocks, Chester L., Bushong, Kan.
Stockton, Chas. G., Buffalo, N. Y.
Stockwell, Benjamin E., St. Louis.
Stone, Chas. E., Shoals, Ind.
Stone, Willard E., Toledo, Ohio.
Stoops, P. H., Ipava, Ill.
Stover, Chas., Amsterdam, N. Y.
Stowell, James H., Chicago.
Strode, Robt. C., Mexico, Mo.
Stroud, C. G., Erbacon, W. Va.
Strouss, U. S., Beaver, Pa.
Stubbins, S. G., Birmingham, Ala.
Stucky, Thomas H., Louisville, Ky.
Stultz, Benj. F., Mowequa, Ill.
Stumm, T. W., St. Paul, Minn.
Sturgis, W. E., Kennett, Mo.
Sullivan, J. H., Charlotte, N. Y
Summers, J. S., Jefferson City, Mo.
Swan, John M., Watkins, N. Y.
Swan, W. S., Harrisburg, Ill.
Swaney, A. G., Cox's Summit, Mo.
Swartsel, S. C., Cincinnati.
Swope, Opie W., Holly, Colo.
Talbot, Ambrose, Kansas City, Mo.
Tatum, Harry E., Brunswick, Mo.
Taugher, J. P., Milwaukee, Wis.
Taussig, Albert E., St. Louis.
Taussig, Arnold S., Denver.
Taylor, E. P., Fairfax, Mo.
Taylor, J. E., Leopold, Ind.
Taylor, T. M., New York.
Taylor, W. R., Ft. Recovery, Ohio.
Teas, James Joseph, Waverly, Tenn.
Teel, S. M., Prairie Home, Mo.
Temple, C. H., Glasgow, Mo.
Thackeray, W. T., Chicago.
Tharp, Royal, Benton, Ill.
Thiberge, Narcisse F., New Orleans.
Thielen, M. H., Grundy Center, Ia.
Thieme, G. C., Baltimore, Ind.
Thompson, A. W., Galt, Mo.
Thompson, C. W., Meadville, Pa.
Thornton, Joseph E., Columbia, Mo.
Thornton, William H., Buffalo, N. Y.
Thorpe, A. V., Jamestown, Mo.
Throckmorton, Tom M., Chariton, Iowa.
Thurmser, Lawrence, St. Louis.
Thurston, H. S., Indianapolis.
Tice, Frederick, Chicago.
Tidball, J., Pacific Beach, Cal.
Tilston, Wilder, New Haven, Conn.
Tiller, J. A., Bloomfield, Mo.
Tillotson, James R., Delphos, Ohio.
Timberman, J. H., Marston, Mo.
Toalson, Jas. J., Peoria, Ill.
Todd, William T., Thompson, Mo.
Toland, W. H., Mineral Springs, Ark.
Tollison, W. A., Eufaula, Okla.
Tompkins, Wm. W., Charleston, W. Va.
Toner, L. E., Piedmont, Mo.
Topping, M. H., Flat River, Mo.
Tout, B. B., Archie, Mo.
Townsend, W. H., St. Louis.
Trask, C. A., Kansas City, Mo.
Traublitz, Arnold, Neelyville, Mo.
Travis, D. J., Eddyville, Ky.
Travis, P. M., Gilbertsville, Ky.
Treat, David T., Ann Arbor, Mich.
Treynor, Y. L., Council Bluff, Ia.
Trotter, G. S., Dundas, Ill.
Trout, W. A., Atwater, Ill.
Troutman, R. E., Logansport, Ind.
Trueblood, R. R., Lawrenceville, Ill.
Tubbs, Geo. R., West Point, Ind.
Turck, Fenton B., Chicago.
Turner, A. F., Taylorville, Ill.
Tweedy, J. R., Orrville, Ill.
Tweedy, Walter R., Royalton, Ill.
Tyree, Cyrus E., Trenton, Tenn.
Ude, Waldemar, St. Louis.
Upham, H. J., Columbus, Ohio.
Urban, Robt. O., Evansville, Ill.
Vadakin, J. H., Bushong, Ill.
Vandervort, F. C., Bloomington, Ill.
Vandivert, A. H., St. Joseph, Mo.
Van Dyke, A. D., Marysville, Pa.
Van Gasken, Frances C., Philadelphia.
Van Hoefen, T., St. Louis.
Van Hoefen, Samuel, St. Louis.
Van Hoefen, Siegfried, St. Louis.
Van Hook, H. M., Mt. Pulaski, Ill.
Van Winkle, B. L., Belpre, Ohio.
Van Zwalenburg, Jas. G., Ann Arbor, Mich.
Vaughn, H. C., Shelbina, Mo.
Vertrees, C. M., Murrayville, Ill.
Vessells, Francis M., Perryville, Mo.
Vieth, Edw. J., St. Louis.
Vinyard, G. W., Jackson, Mo.
Vitt, Rudolph S., St. Louis.
Voris, H. M., East St. Louis, Ill.
Wadsworth, J. L. R., Collinsville, Ill.
Wagers, Arthur J., St. Louis.
Walker, Henry Owen, Newport, Ark.
Walker, H. W., Grantsburg, Ill.
Walker, James Hamilton, Effingham, Ill.
Walker, R. A., St. Louis.
Wallace, J. S., Brunswick, Mo.
Wallis, James C., Arkadelphia, Ark.
Wallis, J. R., Clinton, Mo.
Walt, D. C., Little Rock, Ark.
Ward, Edgar P., Ft. Lupton, Colo.
Warren, G. A., Black Rock, Ark.
Washburn, George W., Peoria, Ill.
Washburn, Lawrence Lee, Heights, Ky.
Waterman, J. A., Jefferson City, Mo.
Waters, R. S., Brookport, Ill.
Waters, S. C., Middletown, Ind.
Waters, W. T., New London, Mo.
Watson, Walter, Mt. Vernon, Ill.
Wattleworth, James R., Yale, Ill.
Way, James P., Chicago.
Weber, Geo. H., Peoria, Ill.
Webster, Geo. W., Chicago.
Weir, S. W., Marshall, Ill.
Weis, J. W., Manchester, Ill.
Weiss, H. G., Rochester, Ind.
Weiss, Richard S., St. Louis.
Weiss, William, St. Louis.
Weitzner, Herman L., St. Louis.
Welch, J. C., Bellevue, Pa.
Welch, William A., Callao, Mo.
Well, Wm., Versailles, Mo.
Wells, Russell P., Pleasant Hill, Ill.
Wesseler, F. W., St. Louis.
West, Wm. M., Monett, Mo.
Whaley, Lewis, Birmingham, Ala.
White, Chas. A., St. Louis.
White, E. C., West Brooklyn, Ill.
White, C. C., Adair, Okla.
White, S. Marx, Minneapolis.
White, Sam W., Franklin, Tenn.
Whited, D. F., Dahlgren, Ill.
Whitefort, A. R., St. Elmo, Ill.
Whitman, Wm. V., Tucson, Ariz.
Wickham, A. B., Detroit.
Wilcox, S. H., Shattuc, Ill.
Wilhelmy, A. F., Decatur, Ill.
Wilhoit, J. C., Manhattan, Kan.
Wilkes, B. A., St. Louis.
Wilkins, David R., Pocahontas, Ill.
Wilkinson, George E., Alton, Ill.
Williams, F. S., Villisca, Iowa.
Williams, Martha R., Cincinnati.
Williams, W. T., Mt. Carmel, Pa.
Williamson, W. H., Mokena, Mo.
Willingham, Edward B., Paducah, Ky.
Wilson, Dunning S., Louisville, Ky.
Wilson, E. H. G., Cape Girardeau, Mo.
Wilson, H. E., Centralia, Ill.
Wilson, J. F., Burlison, Tenn.
Wilson, J. M., Marissa, Ill.
Wilson, Olive A. C., Paragould, Ark.
Wilson, Robert, Jr., Charleston, S. C.
Wilson, W. A., Willard, N. Mex.
Willson, Robert N., Philadelphia.
Winn, R. M., Hannibal, Mo.
Winter, William, St. Louis.
Wire, G. W., Wilmington, Ohio.
Witherspoon, J. A., Nashville, Tenn.
Witmer, C. M., Marble Hill, Mo.
Witt, W. H., Nashville, Tenn.
Witter, W. L. M., Milan, Mo.
Wolf, I. C., Kansas City, Mo.
Wolfe, Harlow M., Taylorville, Ill.
Wolfe, Samuel, Philadelphia.
Wood, Adolph M., Lentner, Mo.
Wood, Hilliard, Nashville, Tenn.
Woodson, L. M., Gallatin, Tenn.
Woodward, C. E., Decatur, Ill.
Woodward, H. L., Cincinnati.
Woolley, W. T., Seattle, Wash.
Wootton, W. T., Hot Springs, Ark.
Wright, Lyman D., Rochester, Ill.
Wright, Nelson A., Manito, Ill.
Wright, W. E., Newark, Ohio.
Wyer, H. G., Kirkwood, Mo.
Wynn, Frank B., Indianapolis.
Yates, Martin, Fulton, Mo.
Yates, William N., Fayetteville, Ark.
Yeagle, Rowland P., Pleasant Hill, Mo.
Yeater, H. P., Maysville, Mo.
Yencer, M. W., Richmond, Ind.
Yocum, L. A., Wooster, Ohio.
Yolton, John L., Bloomington, Ill.
York, Margaret M., Flushing, N. Y.
Young, J. G., Pontiac, Ill.
Youngman, J. Andrew, St. Louis.
Youngquist, Alfred G., Marquette, Mich.
Yung, J. R., Terre Haute, Ind.
Zimmerman, Carl A. W., East St. Louis, Ill.
Zitninger, George F., Canton, O.
Zook, A. J., Adair, Iowa.

Obstetrics and Diseases of Women

Abrams, Edward T., Dollar Bay, Mich.
Aird, A. J., Carterville, Ill.
Altman, J. T., Nashville, Tenn.
Altman, Maurice, Springfield, Ill.
Anderson, Winchell, San Francisco.
Andrews, Frank T., Chicago.
Angle, George K., Silver City, N. M.
Ayers, Treston R., St. Louis.
Bacon, Charles S., Chicago.
Baker, George W., Ogden, Utah.
Baker, Marshall, Webster Groves, Mo.
Baldy, John M., Philadelphia.
Ballard, C. C., Oklahoma City, Okla.
Bandler, Samuel Wyllis, New York
Barbour, E. E., Peoria, Ill.
Barrett, Channing W., Chicago.
Bassett, C. W., St. Louis.
Beattie, T. J., Kansas City, Mo.
Bedal, Adelheid C., St. Louis.
Bell, J. F., Elgin, Ill.
Bell, John N., Detroit.
Benjamin, Arthur E., Minneapolis.
Bentele, Elizabeth, St. Louis.
Blender, William, Carthage, Ill.
Blocklinger, A. H., Dubuque, Iowa.
Boldt, H. J., New York.
Boswell, C. J., Mounds, Ill.
Boyd, D. H., Pittsburg, Pa.
Bradford, Walter C., Shawnee, Okla.
Bremmer, H. L., Ashton, Ill.
Brown, Columbus, Herrin, Ill.
Bullard, Rose T., Los Angeles.
Burkhardt, C. F., Effingham, Ill.
Burns, Howard, Carrollton, Ill.
Burns, T. Mitchell, Denver.
Byford, Henry T., Chicago.
Byrum, J. M., Shawnee, Okla.
Cadwallader, J. H., St. Louis.
Campbell, H. J., Jacksonville, Ill.
Cape, L. W., Maplewood, Mo.
Carley, Harry D., St. Louis.
Carson, Gib W., St. Louis.
Carstens, J. H., Detroit.
Chalfant, Sidney A., Pittsburg.
Chumley, Charles A., Rocky, Okla.
Clark, John E., Philadelphia.
Clark, M. T., Temple, Okla.
Clegg, Joseph T., Siloam Springs, Ark.
Cook, Charles P., New Albany, Ind.
Cooper, St. Cloud, Fort Smith, Ark.
Copeland, M. A., Birmingham, Ala.
Crain, B. F., Carterville, Ill.
Crossen, H. S., St. Louis.
Culbertson, Carey, Chicago.
Curtis, A. N., St. Louis.
Dail, A. W., Cement, Okla.
Damour, F., Bolckow, Mo.
Damron, O. H., Silex, Mo.
Davis, E. C., Atlanta, Ga.
Davis, E. N., Little Rock, Ark.
Davis, J. D. S., Birmingham, Ala.
Deichmann, Otto E., Springfield, Ill.
Dever, Harvey Albert, El Reno, Okla.
Doane, Philip S., Chicago.
Doederlein, Theo J., Chicago.
Dorsey, F. B., Keokuk, Iowa.
Dorsett, E. Lee, St. Louis.
Dorsett, Walter B., St. Louis.
Downs, Alfred J., Los Angeles.
Dreyfuss, Julia, St. Louis.
Dummit, Manford, Pierce City, Mo.
Dunlap, Elbert, Dallas, Tex.
Ehrenfest, Hugo, St. Louis.
Eidmann, Walter Ph., St. Louis.
Estel, G. A., Jacob, Ill.
Evers, Emile T., St. Louis.
Freemore, R. S., Blue Rapids, Kan.
Fleming, C. K., Denver.
Fockler, G. W., Delavan, Ill.
Foulkrod, Collin, Philadelphia.
Frame, C. N., Ewing, Mo.
Frederick, Carlton C., Buffalo, N. Y.
Freeman, T. O., Mattoon, Ill.
Froehlich, Herman, Hibbing, Minn.
Fry, Henry D., Washington, D. C.
Fuchs, Walter H., St. Louis.
Fuhrmann, Richard H., St. Louis.
Gardner, M. N., Greenleaf, Kan.
Garner, William S., Baltimore.
Gayler, W. C., St. Louis.
Gehrung, Eugene C., Denver.
Gellhorn, George, St. Louis.
Gilbert, William, Evansville, Ind.
Gilliam, D. Tod, Columbus, Ohio.
Gillmore, Robert T., Chicago.
Glaser, Martin J., St. Louis.
Glasgow, Frank A., St. Louis.
Gledhill, Henry R., Jerseyville, Ill.
Goffe, J. Riddle, New York.
Goldspohn, Albert, Chicago.
Gray, A. L., St. Joseph, Mo.
Greer, Bertha Allen, Lamoni, Iowa.
Hall, C. Lester, Kansas City, Mo.
Hamilton, M. F., Mannington, W. Va.
Handley, Walter E., St. Louis.
Hanna, M. A., Ava, Mo.
Hargrave, Edward T., Norfolk, Va.
Harmann, M. F., St. Louis.
Hartley, S. D., Nebo, Mo.
Hartung, Henry, Chicago.
Hauser, Herman A., St. Louis.
Hays, William H., Hannibal, Mo.
Herington, Warner, Green City, Mo.
Herriott, R. Lee, San Antonio, Tex.
Hinchey, Frank, St. Louis.
Hipke, Gustav A., Milwaukee, Wis.
Hodges, Duff M., East Prairie, Mo.
Hoffman, C. S., Keyser, W. Va.
Holland, S. J., Paducah, Ky.
Holt, E. E., St. Louis.
Hopkins, M. J., St. Louis.
Howard, Charles E., Benton, Ky.
Hull, Otho W., Tulsa, Okla.
Huggins, Raleigh R., Pittsburg, Pa.
Hypes, B. M., St. Louis.
Jacobson, Henry, St. Louis.
Jacobson, J. H., Toledo, Ohio.
Jewett, Charles, Brooklyn.
Johnson, Frank P., St. Louis.
Johnson, George A., Moberly, Mo.
Johnson, Henry L. E., Washington, D. C.
Johnston, J. Ambrose, Cincinnati.
Kahn, Maurice, Chicago.
Kasten, W. C., Fort Madison, Iowa.
Keehn, G. A., St. Louis.
Kelly, J. W., Springfield, Ill.
Kendell, Herbert W., Covington, O.
Kennedy, Bernays, Indianapolis.
Kenton, J. R., Raymond, Ill.
Kepler, Charles Ober, Boston.
Kerr, William, Randolph, Iowa.
Kerwin, W., St. Louis.
Kier, William F., St. Louis.
Kimball, Arthur C., St. Louis.
Kirton, J. R. W., Phoenix, Mich.
Lattin, Cora Billings, Buffalo, N. Y.
Lawrence, Florus F., Columbus, Ohio.
Leonard, Homer O., Kansas City, Mo.
Leslie, James Frank, Maunie, Ill.
Long, Judson H., East Moline, Ill.
Lothrop, Karl P., Buffalo, N. Y.
Lougeay, S. M., Fayetteville, Ill.
Luzader, Katherine B., Greenville, Ill.
Mackey, A. N., Aledo, Ill.
Manton, W. P., Detroit.
March, E. J., Canton, Ohio.
Marcy, Henry O., Boston.
Marshall, Clara, Philadelphia.
Marx, Ella, St. Louis.
Massey, G. Betton, Philadelphia.

Max, C. O. C., St. Louis.
Mayes, J. A., Denison, Tex.
McAlexander, R. O., Indianapolis.
McCallin, A. E., Hancock, Wis.
McCarroll, Horace R., Walnut Ridge, Ark.
McCullough, G. T., Missoula, Mont.
McEwen, Mary Gilruth, Evanston, Ill.
McGann, Peter J., Wellston, Mo.
McGowen, T. J., Vincennes, Ind.
McGuire, M. F., Montpelier, Vt.
McKee, E. S., Cincinnati.
McLean, Mary H., St. Louis.
McMurray, R. J., St. Francisville, Ill.
McMurtry, Lewis S., Louisville, Ky.
McNutt, Julia G., Albany, N. Y.
McNutt, Sarah J., New York.
McPherson, Ross, New York.
McRoberts, W. J., Hot Springs, S. D.
Meek, Edward, Little Rock, Ark.
Miller, C. Jeff, New Orleans.
Miner, Elizabeth R., Macomb, Ill.
Missimore, L. E., St. Louis.
Mitchell, John H., Mount Vernon, Ill.
Montgomery, Edward B., Quincy, Ill.
Montgomery, E. E., Philadelphia.
Moore, B. W., St. Louis.
Moon, Phoebia Gean, Mannington, W. Va.
Morris, L., Stockport, Iowa.
Mosher, Eliza M., Brooklyn.
Murphy, John C., St. Louis.
Myers, J. F., Decatur, Ala.
Neff, G. R., Farmington, Iowa.
Newman, Henry Parker, San Diego, Cal.
Newman, J. W., New Orleans, La.
Newman, Percy, St. Louis.
Noble, Sarah A., Clearwater, Kan.
Novak, Emil, Baltimore, Md.
Ogle, Alvin L., St. Louis.
Oliver, A. H., Edwardsville, Ill.
Olsen, S. H., Milaca, Minn.
Oyler, H. S., Lincoln, Ill.
Pantzer, H. O., Indianapolis, Ind.
Parman, David R., St. Louis.
Parrish, George, Portland, Ore.
Paschall, J. B., Fulton, Ky.
Patton, Chas. L., Springfield, Ill.
Peck, George A., New Rochelle, N. Y.
Peterson, Reuben, Ann Arbor, Mich.
Potter, Irving W., Buffalo, N. Y.
Potter, Marjory J., Niagara Falls, N. Y.
Potts, F. T., Toluca, Ill.
Powell, Ignatius W., St. Louis.
Raab, Ernst P., Belleville, Ill.
Randle, H. T., Clayton, Mo.
Rice, Dell Frank, St. Louis.
Reis, Emil, Chicago.
Ritter, Caleb A., Kansas City, Mo.
Robbie, Mary King, San Antonio, Tex.
Rodman, W. W., Pierce City, Mo.
Rogier, Henry O., Mason City, Ill.
Rothrock, J. L., St. Paul, Minn.
Rosenthal, Max, New York, N. Y.
Rotter, Charles F., St. Louis, Mo.
Rusk, Elizabeth, St. Louis, Mo.
Russell, Rose A., Granite City, Ill.
Ryland, C. T., Lexington, Mo.
Schlenker, Otto L., St. Louis.
Sampson, John A., Albany, N. Y.
Sands, T. E., Battle Creek, Mich.
Sanes, K. I., Pittsburg, Pa.
Scheel, A. M., Belleville, Ill.
Schloesstein, A. G., St. Louis.
Schmeling, A. F., Columbus, Wis.
Schoenberg, Albert J., Chicago.
Schulz, Edward, St. Louis.
Schwarz, Henry, St. Louis.
Scott, James M., St. Louis.
Shafer, H. O., Chicago.
Shafer, Winfield S., Rochester, Ind.
Shawl, J. L., Onarga, Ill.
Shlenker, Milton A., New Orleans.
Shoemaker, G. Erety, Philadelphia.
Short, R. B., Union Mills, Ind.
Sigmond, Harvey W., Crawfordsville, Ind.
Simpson, F. F., Pittsburg.
Singer, Jacob Jesse, St. Louis.
Smith, Frederick LeRoy, Chatfield, Minn.
Smith, H. W., Roadhouse, Ill.
Smith, L. S., Gypsy, W. Va.
Smith, Richard R., Grand Rapids, Mich.
Spain, Kate E., St. Louis.
Strange, J. W., Loogootee, Ind.
Starring, Anna M. F., Detroit, Mich.
Stears, Henry John, St. Louis.
Sullivan, Walter G., Providence, R. I.
Sutton, H. T., Zanesville, Ohio.
Swahlen, Percy H., St. Louis.
Swearingen, Budd Van, Ft. Wayne, Ind.
Taussig, Fred. J., St. Louis.
Teter, D. P., Chicago.
Thompson, Logan M., Macon, Mo.
Thompson, Wm. H., Winamac, Ind.
Threadgill, Jesse M., New Douglas, Ill.
Tinney, R. M., Kerwin, Kan.
Tobin, John R., Elgin, Ill.
Toombs, Percy W., Memphis Tenn.
Trigg, J. M., Shawnee, Okla.
Tucker, R. O., Nashville, Tenn.
Tuholske, Morris St., St. Louis.
Urban, E. T., St. Louis.
Vandervoort, Louis E., Battle Creek, Mich.
Vogt, William H., St. Louis.
Walker, Edwin, Evansville, Ind.
Walker, J. A., Shawnee, Okla.
Wallace, G. R., Bertrand, Mo.
Walton, John H., Medora, Ill.
Weeks, L. C., Detroit, Minn.
Weinsberg, Julius H., St. Louis.
Welch, John E., New York.
Wentker, B. P., St. Charles, Mo.
Werder, X. O., Pittsburg, Pa.
Wetherill, Horace G., Denver.
Whetstone, Mary S., Minneapolis.
White, Marion L., Dixon, Ill.
Wickstrom, A. M., Chicago.
Wickstrom, Emma M., Chicago.
Willeford, Geo. W., Washington, Ind.
Wilson, Dora Greene, Kansas City, Mo.
Wilson, Roy E., LaBelle, Mo.
Winter, H. A., Saybrook, Ill.
Wolms, R. E., St. Louis.
Woodul, T. W., Pine Bluff, Ark.
Wright, Louisa V., Camas, Wash.
Yerkes, T. P., Upper Alton, Ill.
Yost, Walter F., St. Louis.
Zimmermann, Ernst, Quincy, Ill.
Zinke, E. Gustav, Cincinnati, Ohio.

Surgery

Abbe, Robert, New York.
Abbe, Truman, Washington, D. C.
Abbott, C. A., Oskaloosa, Ia.
Abbott, George K., Loma Linda, Cal.
Abelmann, Henry W., Chicago.
Abramson, Louis, Shreveport, La.
Ader, Lewis H., Jr., Philadelphia.
Albrecht, Franklin H., St. Louis.
Alderson, R. E., Prairie Hill, Ky.
Alexander, R. D., St. Louis.
Alexander, R. J., Waco, Tex.
Allaben, John E., Rockford, Ill.
Allen, Carroll W., New Orleans.
Allen, L. G., Litchfield, Ill.
Allen, William L., Davenport, Ia.
Allison, Nathaniel, St. Louis.
Ambrose, Oliver A., St. Louis.
Amyx, Robert F., St. Louis.
Anderson, C. F., Nashville, Tenn.
Anderson, H. B., Newark, O.
Anderson, Hartley J., Pittsburg, Pa.
Andrews, E. Wyllys, Chicago.
Applegate, W. A., Washington, D. C.
Armstrong, Guy L., Taylorville, Ill.
Armstrong, John H., St. Louis.
Asman, Bernard, Louisville, Ky.
Axline, Joseph T., St. Louis.
Axtell, J. T., Newton, Kan.
Ayers, Douglas, Fort Plain, N. Y.
Ayers, Samuel, Kansas City, Mo.
Babler, Edmund A., St. Louis.
Bacon, Joseph B., Macomb, Ill.
Bailey, Fred W., St. Louis.
Bain, Frank D., Kenton, O.
Baird, Ben D., Galesburg, Ill.
Baker, A. E., Charleston, S. C.
Baker, W. M., St. Louis.
Ball, W. A., Wanette, Okla.
Ballenger, Edgar G., Atlanta, Ga.
Ballin, Max, Detroit.
Bansbach, J. J., St. Joseph, Mo.
Barcus, Paul A., Crawfordsville, Ind.
Barker, F. Dale, Dayton, O.
Barnsback, R. E., Edwardsville, Ill.
Barnett, Charles E., Fort Wayne, Ind.
Barnes, Rollin H., St. Louis.
Barney, Reuben, Chillicothe, Mo.
Bartels, Leo G., St. Louis.
Bartlett, Willard, St. Louis.
Bascom, H. M., Ottawa, Ill.
Basham, D. W., Wichita, Kan.
Bath, Thomas W., Bloomington, Ill.
Battey, William W., Jr., Augusta, Ga.
Beach, William M., Pittsburg, Pa.
Beck, Carl, Chicago, Ill.
Beck, Emil G., Chicago.
Beck, H. E., Moline, Ill.
Becker, W. H., St. Louis.
Becknell, I. J., Goshen, Ind.
Becton, E. P., Greenville, Tex.
Beede, S. C., David City, Neb.
Beedle, Gordon A., Kansas City, Mo.
Bell, Elexious T., Columbia, Mo.
Benepe, John L., San Jose, Cal.
Bennett, H. F., Litchfield, Ill.
Bennett, R. M., Mound Valley, Kan.
Bentley, Edwin, Little Rock, Ark.
Besley, Frederic A., Chicago.
Bevan, Arthur Dean, Chicago.
Bigelow, Isaac S., Dubuque, Ia.
Biggs, M. O., Bowling Green, Mo.
Biles, Lee E., Augusta, Ark.
Billington, R. Wallace., Nashville, Tenn.
Binney, R. W., Granite City, Ill.
Binnie, J. F., Kansas City, Mo.
Bishop, William S., Harrisburg, Pa.
Bispham, W. N., Washington, D. C.
Bisson, W. C., Abingdon, Ill.
Black, Carl E., Jacksonville, Ill.
Black, William Thomas, Memphis Tenn.
Blackburn, John H., Bowling Green, Ky.
Blain, Alexander W., Detroit.
Blake, C. D., Ellis, Kan.
Blake, John Bapst, Boston.
Blesh, A. L., Oklahoma City, Okla.
Bloodgood, Joseph L. Colt, Baltimore, Md.
Bobb, B. A., Mitchell, S. Dak.
Bock, A. F., St. Louis.
Boehm, Joseph L., St. Louis.
Boor, Myron A., Terre Haute, Ind.
Borck, Edgar L., Canada.
Bosher, Lewis C., Richmond, Va.
Bottomley, John T., Boston.
Boulware, T. C., Butler, Mo.
Bounds, Edward B., Hannibal, Mo.
Bourn, John J., Hannibal, Mo.
Bowen, A. B., Maquoketa, Iowa.
Bowers, Charles E., Wichita, Kan.
Bowers, L. G., Dayton, O.
Boyd, D. F., Victor, Tex.
Boyd, Frank, Paducah, Ky.
Boyle, G. A., Enid, Okla.
Braasch, W. F., Rochester, Minn.
Bracelkin, W. W., Higginsville, Mo.
Brandau, John W., Clarksville, Tenn.
Bray, Charles W., Biwabik, Minn.
Bremerman, Lewis Wine, Chicago.
Brumbaugh, Nashville, Tenn.
Brooks, John G., Paducah, Ky.
Broome, G. Wiley, St. Louis.
Broumer, Walter Brooks, New York.
Brown, Edward M., Chicago.
Brown F. H., Billings, Mo.
Brown, John Young, St. Louis.
Bruce, W. W., Casey, Ill.
Bryan, J. C., Bettendorf, Ill.
Bryan, Thomas F., Dublin, Tex.
Buck, Ulysses G., Rothville, Mo.
Buckmaster, Frank, Effingham, Ill.
Bunce, Philip D., Hartford, Conn.
Bunch, Rodney J., St. Louis.
Burge, A. J., Iowa City, Ia.
Burford, C. E., St. Louis.
Burke, John P., California, Mo.
Burns, Robert J., Kansas.
Burrows, T. W., Ottawa, Ill.
Burry, James, Chicago.
Busby, Charles D., Brooklyn, Ia.
Buser, John H., Duluth, Minn.
Buswell, C. A., Chicago.
Byrne, John L., St. Joseph, Mo.
Cabot, Hugh, Boston.
Cadwell, Lyle, Poplar Bluff, Mo.
Cahill, L. L., Springer, N. Mex.
Calbreath, C. B., Lineville, Iowa.
Cale, George W., Jr., St. Louis.
Calkins, Irving R., Springfield, Mass.
Campbell, A. J., Syracuse, N. Y.
Campbell, O. Beverly, St. Joseph, Mo.
Campbell, R. L., East St. Louis, Ill.
Cantrell, C. E., Greenville, Tex.
Cargile, Charles B., Bentonville, Ark.
Carlaw, C. M., Minneapolis.
Carmany, Harry S., Philadelphia.
Carriere, V. A., Litchfield, Ill.
Carson, George S., Chatsworth, Ill.
Carson, N. B., St. Louis.
Carter, W. J., Mattoon, Ill.
Caster, M., Louisville, Ky.
Castle, Harry, Springfield, Ill.
Chase, Ira Carlton, Fort Worth, Tex.
Chassaignac, Charles, New Orleans.
Chenoweth, L. C., Webb City, Mo.
Cherry, T. Ewing, Cowden, Ill.
Chesire, Matt U., Marshalltown, Ia.
Cheyne, Walter, Sumter, S. C.
Childress, M., Oskaloosa, Ia.
Childs, Samuel B., Denver.
Chilton, James C., Hannibal, Mo.
Chowning, Thomas, Hannibal, Mo.
Christie, G. R., Long Prairie, Minn.
Christie, H. J., Quincy, Ill.
Chute, Arthur L., Boston.
Clack, J. M., Rockwood, Tenn.
Clapper, W. L., St. Louis.
Clarke, B. W., St. Louis.
Clark, Dwight, Evanston, Ill.
Clarke, James Fred, Fairfield, Ia.
Clark, Stanley A., South Bend, Ind.
Clay, A. J., Hoopeston, Ill.
Clemons, E. Jay, Aberdeen, S. Dak.
Cline C. M., Idaho Falls, Ida.
Clopton, Malvern B., St. Louis.
Coffey, R. C., Portland, Ore.
Cokenower, James W., Des Moines, Ia.
Colbert, John William, Albuquerque, N. Mex.
Colcord, A. W., Clairton, Pa.
Cole, Paul F., Steffenville, Mo.
Coleman, J. E., Canton, Ill.
Collins, Clifford W., Peoria, Ill.
Colt, John D., Litchfield, Ill.
Combs, George W., Indianapolis.
Comstock, A. E., St. Paul, Minn.
Condon, Ja. P., Omaha, Neb.
Conley, T. J., Chicago.
Connell, F. Gregory, Oshkosh, Wis.
Conner, Milton C., Middletown, N. Y.
Conway, W. Q., Tulsa, Okla.
Cook, George J., Indianapolis.
Cooke, A. B., Nashville, Tenn.
Coon, W. F., Caney, Kan.
Copeland, Charles C., North Madison, Ind.
Corbus, B. C., Chicago.
Cordier, A. H., Kansas City, Mo.
Cottam, G. G., Rock Rapids, Ia.
Coulter, John H., Sumnitville, Ia.
Cowen, Lewis C., Rising Sun, Ind.
Cox, Allen E., Helena, Ark.
Cox, David A., Howell, Ind.
Cox, Edgar, Mekoma, Ind.
Cram, F. W., Sheldon, Ia.
Crawford, W. W., Hattiesburg, Miss.
Cremer, M. H., Red Wing, Minn.
Crile, George W., Cleveland.
Crisler, Carlton G., Cincinnati.
Crisler, J. A., Memphis, Tenn.
Crooks, Jere L., Jackson, Tenn.
Crosby, I. F., Stuart, Ia.
Crowley, D. D., Oakland, Cal.
Cubbins, William R., Chicago.
Culbertson, N. W., Massillon, O.
Cullen, Thomas S., Baltimore.
Cunningham, W. M., Corona, Ala.
Cuppaidge, G. O., Moberly, Mo.
Curtis, Arthur H., Chicago.
Dale, George L. A., Chicago.
Dalton, Louis, Louisville, Ky.
Danzis, Mat, Newark, N. J.
Darling, Cyrenus G., Ann Arbor, Mich.
Darrow, Daniel C., Moorehead, Minn.
Daugherty, Ben S., South Bend, Ind.
Davey, Benten M., Lansing, Mich.
David, V. C., Chicago.
Davidson, W. P., Sullivan, Ill.
Davis, Nelson J., Omaha, Neb.
Davis, Frank L., St. Louis.
Davis, George G., Chicago.
Davis, John B., Denver.
Davison, Ralph, Chicago.
Deal, Don W., Springfield, Ill.
Dean, John McH., St. Louis.
Deaver, H. C., Philadelphia.
Deaver, John B., Philadelphia.
Deering, Albert H., Dubuque, Ia.
Deutsch, William S., St. Louis.
Dick, Andrew J., Watertown, N. Y.
Dicken, William E., Oklahoma City, Okla.
Dickinson, G. K., Jersey City, N. J.
Dickson, Paul L., Paragould, Ark.
Dillman, J. V., Louisville, Ill.
Dissinger, S. Canal Fulton, O.
Dixon, Charles H., St. Louis.
Dodds, E. F., Missoula, Mont.
Dodds, J. C., Champaign, Ill.
Dodson, J. W., Dallas, Tex.
Doege, Karl, Mansfield, Wis.
Donaldson, Walter F., Pittsburg, Pa.
Donkle, L. B., Chicago.
Donnelly, James, Canada, O.
Doolittle, H. M., Dallas, Tex.
Dorr, E. E., Des Moines, Ia.
Doty, C. M., Mason, Ill.
Downing, W. L., Moulton, Ia.
Doyle, John M., St. Joseph, Mo.
Doyle, William J., St. Louis.
Dreisbach, Norman, Minneapolis.
Dudley, Clifton R., St. Louis.
Dugan, R. C., Duluth, Minn.
Dunavant, Buford N., Memphis, Tenn.
Duncan, James A., Toledo, O.
Duncan, W. P., Jacksonville, Ill.
Dunham, Carroll, Chicago, Ill.
Dunlop, H. E., Canton, Mo.
Dunsmoor, F. A., Minneapolis.
Dupuy, Charles M., Riley, Ind.
Duringer, W. A., Fort Worth, Tex.
Dutzi, August, St. Louis.
Earhart, T. W., Mollberry, Ind.
Earle, Curran B., Greenville, S. C.
Eberlein, E. W., St. Louis.
Eckelman, Metius M., Elkhart, Ind.
Edmonson, George S., Clinton, Ill.
Edmunds, Page, Baltimore.
Ehresmann, A. J., Carrollton, Ill.
Eisendrath, Daniel N., Chicago.
Eitel, G. G., Minneapolis.
Elam, W. T., St. Joseph, Mo.
Elbrecht, O. H., St. Louis.
Elkins, W. H., Crystal City, Mo.
Ely, Leonard W., New York.
Engelbrectson, Ferd, Chicago.
English, C. H., Fort Wayne, Ind.
Epler, Crum, Pueblo, Colo.
Epperson, J. C., Kansas, Ill.
Epstein, Meyer J., St. Louis.
Eschbach, H. C., Albia, Ia.
Eskey, Leonard, Wheeling, W. Va.
Eskridge, Belle C., Houston, Tex.
Evans, George B., Dayton, Ohio.
Evans, John L., Wichita, Kan.

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Evans, O. E., Gowrie, Ia.
Ewing, F. W., Terral, Okla.
Fairbrother, H. C., East St. Louis, Ill.
Fairchild, D. S., Clinton, Ia.
Fall, C. P., Beatrice, Neb.
Farr, Robert Emmett, Minneapolis.
Fay, Oliver J., Des Moines, Ia.
Fell, George Edward, Buffalo, N. Y.
Ferguson, Alex. Hugh, Chicago.
Ferguson, E. C., Edwardsville, Ill.
Ferguson, Robert Henry, East Orange, N. J.
Ferguson, Wilson J., Sedalia, Mo.
Finney, W. H., Clintonville, Wis.
Fisher, Elbert E., Salem, Ore.
Fisher, V. L., Mount Vernon, O.
Fisher, Waldo, Alton, Ill.
Fite, Francis B., Muskogee, Okla.
Fitts, Alston, Tuscaloosa, Ala.
Fitzpatrick, D. F., Iowa City, Ia.
Fitzpatrick, M. W., Decatur, Ill.
Fochtman, F. W., Cumberland, Md.
Ford, J. H., Indianapolis.
Forney, Charles D., Wichita, Kan.
Fortner, Benj. F., Springfield, Ill.
Foster, J. P., Lorraine, Mo.
Fowler, J. V., Chicago, Ill.
Fox, Frank E., Fulton, N. Y.
Fox, Ralph D., Bloomington, Ill.
Fox, Sylvester D., St. Louis, Mo.
Franke, W. E. Newton, Ill.
Frankenthal, Maurice A., St. Louis.
Freund, Newton M., St. Louis.
Frick, W. J., Kansas City, Mo.
Friedlaender, Bernhard, Sebewaing, Mich.
Fulgham, J. H., East St. Louis, Ill.
Fuller, T. Texarkana, Tex.
Fuller, William, Chicago.
Funkhouser, Robert M., St. Louis.
Gage, Homer, Worcester, Mass.
Gallwey, John, San Francisco.
Gant, Samuel G., New York.
Garrison, C. W., Fort Smith, Ark.
Garwood, A., New Braunfels, Tex.
Gaub, Otto C., Pittsburg, Pa.
Gavin, S. E., Fond du Lac, Wis.
Gettys, Henry B., St. Louis.
Giannini, B. E., Coalmont, Ky.
Gibson, L. P., Little Rock, Ark.
Giles, E., Shawnee, Okla.
Gillette, Arthur J., St. Paul, Minn.
Gillette, William J., Toledo, O.
Gillis, Frank P., Du Quoin, Ill.
Gilmore, W. H., Mount Vernon, Ill.
Glennon, William P., St. Louis.
Glidden, Stephen C., Danville, Ill.
Godfrey, Henry T., Galena, Ill.
Goode, Rhett, Mobile, Ala.
Goodloe, Hart, Canon City, Colo.
Goodrich, R. H., Chamberlain, S. Dak.
Gorin, M. George, St. Louis.
Graessle, George W., Seymour, Ind.
Graham, Alois B., Indianapolis.
Graham, David W., Chicago.
Graham, J. A., Chicago.
Grant, W. W., Denver.
Graul, Robert E., St. Louis.
Graves, Spencer C., St. Louis.
Gray, W. L., Champaign, Ill.
Grayston, Wallace S., Huntington, Ind.
Greaves, Walter W., La Salle, Ill.
Green, Frederick R., Chicago.
Green, G. W., Chicago.
Greensfelder, Louis A., Chicago.
Griffin, Fred, Mexico, Mo.
Griffin, John Morse, Sulphur Springs, Ark.
Griffith, D. M., Owensboro, Ky.
Griffith, J. D., Kansas City, Mo.
Grim, E. C., Kirksville, Mo.
Grimm, P. G., Edgar, Neb.
Grinstead, W. F., Cairo, Ill.
Guerry, Le Grand, Columbia, S. C.
Gulman, Charles N., St. Louis.
Gulwan, John O., St. Louis.
Gundlach, Arthur, St. Louis.
Guthrie, George W., Wilkes-Barre, Pa.
Guthrie, W. A., Franklin, Ky.
Guthrie, William E., Bloomington, Ill.
Haeker, Christian G., Albany, N. Y.
Haeberlin, John B., Chicago.
Haecker, L. E., Hampton, Ia.
Haessly, S. B., Red Wing, Minn.
Haffner, E. L., Hermann, Mo.
Hagerty, Thomas, East St. Louis, Ill.
Hagerty, Meade E., St. Louis.
Haggard, W. D., Nashville, Tenn.
Hagner, Francis R., Washington, D. C.
Hahn, L. A., Guthrie, Okla.
Haines, W. D., Cincinnati.
Hairgrove, J. W., Jacksonville, Ill.
Hall, Andy, Mount Vernon, Ill.
Hall, Thomas H., Gillespie, Ill.
Hallam, J. C., St. Louis.
Hamel, A. H., St. Louis.
Hamilton, J. W., Mount Vernon, Ill.
Hamilton, S. S., Punxsutawney, Pa.
Hamilton, W. D., Columbus, O.
Hamlin, Oliver D., Oakland, Cal.
Hanes, Granville S., Louisville, Ky.
Haning, H. C., Dayton, O.
Hanna, Robert A., Peoria, Ill.
Harpole, Charles B., Evansville, Ind.
Harrell, H. J., St. Louis.
Harrelson, N. O., Kansas City, Mo.
Harris, Charles Grant, Festus, Mo.
Harris, Charles H., Fort Worth, Tex.
Harris, H. W., Winchester, Mo.
Harris, M. L., Chicago.
Harris, Rufus C., St. Louis.
Harry, Charles Rex, Stockton, Cal.
Harsha, William M., Chicago.
Hawkins, A. H., Cumberland, Md.
Hawkins, G. W., Salisbury, Mo.
Hawkins, John A., Pittsburg, Pa.
Hayden, A. M., Evansville, Ind.
Hayden, John Gardner, Kansas City, Mo.
Hayes, D. J., Milwaukee, Wis.
Hayes, Harry M., Peoria, Ill.
Heath, Horace, Denver.
Hebb, Arthur, Baltimore.
Hector, William S., Chicago.
Heddens, James Weir, St. Joseph, Mo.
Hederick, Austin R., Boonville, Ark.
Hedges, Harry Slicer, Brunswick, Md.
Heflin, R. Nelson, Texarkana, Ill.
Heilman, E. S., Ida Grove, Iowa.
Henderson, E. E., Chicago.
Hendon, George A., Louisville, Ky.
Hendrick, J. A., Shreveport, La.
Hennerich, Joseph P., St. Louis.
Hepburn, Thomas N., Hartford, Conn.
Herbst, Robert H., Chicago.
Hertel, Garfield E., Belleville, Ill.
Hertzler, Arthur, Kansas City, Mo.
Hewitt, Walter R., St. Louis.
Hicks, H. M., Amsterdam, N. Y.
Highsmith, J. F., Fayetteville, N. C.
Hilgard, George E., Belleville, Ill.
Hill, James C., Newton, Iowa.
Hill, L. H., Greenway, Ark.
Hill, Roland, St. Louis.
Hill, T. Chittenden, Boston.
Hirschman, Louis J., Detroit.
Hoberecht, C. A., St. Louis.
Hobson, J. A., Flushing, Ohio.
Hocker, Robert T., Lugton, Ky.
Hodgson, Fred G., Atlanta, Ga.
Hoffman, Gideon H., Kewanee, Ill.
Hoffmann, Philip H., St. Louis.
Hogan, Edgar P., Birmingham, Ala.
Hogeboom, R. W., Springfield, Mo.
Hollowbush, J. R., Rock Island, Ill.
Holman, Carl J., Mankato, Minn.
Holt, Charles S., Fort Smith, Ark.
Hoover, Delbert E., Warren, Ohio.
Hopkins, John R., Denver.
Hopkins, Thomas A., St. Louis.
Horsley, J. Shelton, Richmond, Va.
Horst, Otto Carl, St. Louis.
Horwitz, Alexander E., St. Louis.
Hough, Frank S., Sibley, Iowa.
Hough, Garry de N., New Bedford, Mass.
House, A. F., Cleveland.
Howard, A. Philo, Houston, Tex.
Howard, F. A., Slater, Mo.
Howells, James O., Ridgeport, Ohio.
Howton, Oleander, Osceola, Ark.
Hubbell, William B., Elyria, Ohio.
Huffman, Logan H., Hobart, Okla.
Hughes, J. C., Walnut Ridge, Ark.
Hulen, F. P., Pond Creek, Okla.
Hume, Arthur M., Owosso, Mich.
Humiston, Ray, Worthington, Minn.
Hungate, James B., Weeping Water, Neb.
Hupp, Frank Le Moine, Wheeling, W. Va.
Hutto, O. D., Kokomo, Ind.
Hyndman, Charles F., St. Louis.
Irwin, Cyrus H., Sesser, Ill.
Jackson, Jabez N., Kansas City, Mo.
Jackson, Ralph W., Fall River, Mass.
Jaeger, Charles, Denver.
James, Charles S., Centerville, Iowa.
James, R. M., Joplin, Mo.
Jameson, C. H., St. Louis.
Janes, Vincil, Compton, Mo.
Jarvis, E. T., Macomb, Ill.
Jayne, W. A., Denver.
Jelks, John, Memphis, Tenn.
Jepson, W., Sioux City, Iowa.
Jenner, Albert George, Milwaukee.
Jerome, J. N., Evansville, Ind.
Jerome, M. A., Toledo, Ohio.
Joesting, F. C., Alton, Ill.
Johnson, Arthur H., Portland, Ore.
Johnson E. Horace, St. Louis.
Johnson, G. C., Evansville, Ind.
Johnson, H. M., St. Louis.
Johnson Wm. D., Batavia, N. Y.
Jonas, A. F., Omaha, Neb.
Jonas, Ernst, St. Louis.
Jones, C. C., Comfort, Texas.
Jones, D. N., Gaylord, Minn.
Jones, J. L., Jonesburg, Mo.
Jones, W. D., Devils Lake, N. Dak.
Jordan, W. M., Birmingham, Ala.
Judd, E. S., Rochester, Minn.
Jurgens, H. J., Edina, Mo.
Kahler, J. Frank, Canton, Ohio.
Kahn, Lee, Louisville, Ky.
Kalbaugh, Alex. B., Westernport, Md.
Kalbaugh, Z. T., Piedmont, W. Va.
Kane, R. Emmet, St. Louis.
Kee, A. L., Cambridge, Neb.
Keith, F. L., Flat River, Mo.
Keller, John G., Toledo, Ohio.
Keller, Lester, Ironton, Ohio.
Kelleher, T. F., Des Moines, Iowa.
Kelly, William D., St. Paul, Minn.
Kennedy, T. C., Indianapolis, Ind.
Kennedy, Walter U., St. Louis.
Kerr, Archibald A., Salt Lake City.
Kern, Albert G., Knoxville, Tenn.
Kerr, Norman, Chicago.
Kessler, Samuel Fritts, St. Joseph, Mo.
Ketchersid, J. W., Hope, Kans.
Kilburn, Frank, Presque Isle, Me.
King, B. H., Granite City, Ill.
Kirby, Leonidas, Harrison, Ark.
Kirchner, Walter C. G., St. Louis.
Kirkpatrick, H. E., Dalton, Mo.
Kirtuse, G. W., Frazee, Minn.
Kiser, Chas. R., Madison, Ill.
Kieffer, Alonzo R., St. Louis, Mo.
Kleinhans, M. A., Milwaukee, Wis.
Klinefelter, M. L., St. Louis.
Knowitz, O. W., E. St. Louis, Ill.
Knott, Van Buren, Sioux City, Iowa.
Koenig, George W., St. Louis.
Kofron, Joseph V., Cleveland.
Korssell, C. F. P., Chicago.
Kramps, A. F., Chicago.
Kreider, G. N., Springfield, Ill.
Kreisel, Otto, Chicago.
Krouse, Louis J., Cincinnati.
Kuhn, B. F., Elkhart, Ind.
Kurtz, R. L., Nenga, Ill.
Kuttler, Louis, St. Louis.
La Force, W. B., Keokuk, Iowa.
Lambeth, G. S., Moran, Ky.
Larew, John T., St. Louis.
Larimore, Edward Vernon.
Latham, H. W., Latham, Mo.
Latta, Samuel W., Philadelphia.
Lawler, T. A., Taylorville, Ill.
Lawrence, Chas. S., Louis.
Laws, William V., Hot Springs, Ark.
Lawrence, W. B., Batesville, Ark.
Leahy, Maurice, Tiffin, O.
Lee, Jr., Elbert J., St. Louis.
Leighton, William Elston, St. Louis.
Lemon, Charles H., Milwaukee, Wis.
Lescher, Edwin R., Mt. Carmel, Ill.
Lesemann, Frederick J., Chicago.
Lespinasse, Victor, Chicago.
Lessenger, W. S., Mt. Pleasant, Iowa.
Lewin, S., Chicago.
Lewis, Bransford, St. Louis.
Lewis, C. B., St. Cloud, Minn.
Lewis, Charles F., Austin, Minn.
Lewis, Dean, Chicago.
Lewis Robt. C. M., Marion, O.
Lightfoot, J. A., Texarkana, Ark.
Link, J. Joseph, St. Louis.
Littig, L. W., Iowa City, Iowa.
Littig, J. Warren, Minneapolis.
Lloyd, Samuel, New York.
Lockhart, Chas. H., Witt, Ill.
Lockwood, Chas. D., Pasadena, Cal.
Long, Dock, Duncan, Okla.
Long, John W., Greensboro, N. C.
Lord, John Prentice, Omaha.
Lowman, J. B., Johnstown, Pa.
Lucid, M. M., Cortland, N. Y.
Luckey, H. R., Seymour, Ind.
Lund, Herluf G., St. Louis.
Luttrell, Walter, Knoxville, Tenn.
Lutz, Frank J., St. Louis.
Lydston, G. Frank, Chicago.
Lynch, Jerome M., New York.
Lyon, Hartwell N., St. Louis.
MacDonald, Jr., Jos., East Orange, N. J.
Macdonald, John W., St. Louis.
MacGowan, Granville, Los Angeles.
MacKenzie, Robert Gordon, Ann Arbor, Mich.
MacLeod, Geo. D., Cleveland.
Macrae, Jr., Donald, Council Bluffs, Iowa.
Madill, Grant, Ogdensburg, N. Y.
Maes, Urban, New Orleans.
Mahoney, Stephen A., Holyoke, Mass.
Mankopf, R. E., New Haven, Mo.
Mann, Arthur T., Minneapolis.
Manson, F. M., Worthington, Minn.
Marcy, Jr., Henry O., Boston.
Markley, P. L., Rockford, Ill.
Marks, Heine, St. Louis.
Marsh, F. L., Mount Pleasant, Pa.
Marshall, Frank B., Muskegon, Mich.
Marshall, J. A., Pontiac, Ill.
Martin Collier F., Philadelphia.
Martin, Jos. D., New Orleans, La.
Martin, L. H., Hattiesburg, Miss.
Marxmiller, Harry G., Los Angeles, Cal.
Mason, Francis M., Rossville, Ill.
Mason, Will, Murray, Ky.
Masters, George B., Rockwood, Pa.
Mathews, Joseph M., Louisville, Ky.
Matlock, Granville T., Wilkes-Barre, Pa.
Mattison, Fitch C. E., Pasadena, Cal.
Mattison, James A., Marion, Ind.
Maurer, A. Au., LaCrosse, Wis.
Maury, J. W. Draper, New York.
Maxedon, Thos. H., Vincennes, Ind.
May, Albert, Crothersville, Ind.
Mayo, C. H., Rochester, Minn.
Mayo, William J., Rochester, Minn.
McAmis, L. C., St. Louis.
McArthur, Arthur W., Kansas City, Mo.
McCabe, W. M., Nashville, Tenn.
McCandless, W. A., St. Louis.
McCarty, T. L., Dodge City, Kans.
McChord, Robt. C., Lebanon, Ky.
McCall, H. B., Kansas City, Mo.
McClendon, A. A., Marianna, Ark.
McClintock, John C., Topeka, Kan.
McClure, C. E., Detroit.
McCoy Ambrose, Dalton, Tenn.
McCoy, G. C., St. Louis, Mo.
McCoy, P. Y., Evansville, Ind.
McCuistion, L. P., Paris, Texas.
McCully, H. E., Logansport, Ind.
McDonald, J. W., Fairmont, W. Va.
McElhaney, Clarence W., Greenville, Pa.
McGill, W. F., St. Joseph, Mo.
McGraw, Henry R., Denver, Colo.
McKain, C. H., Vicksburg, Mich.
McKay, H. S., St. Louis, Mo.
McKee, J. F., Johnston City, Ill.
McKim, H. W., Labelle, Mo.
McKinney, F. J., Gifford, Ill.
McKinnie, L. H., Colorado Springs, Colo.
McKittrick, Austin S., Kenton, O.
McLaren, J. L., Oakland, Cal.
McLaughlin, A. W., Chicago, Ill.
McLain, W. H., Wheeling, W. Va.
McLean, Angus, Detroit.
McLandress, J. A., St. Charles, Mich.
McMullen, Charles G., Schenectady, N. Y.
McNamara, W. F., Trimountain, Mich.
McNees, A. Jackson, Clinton, Mo.
McNemer, G. H., Cairo, Ill.
McOscar, Edward J., Ft. Wayne, Ind.
McQuillan, Albert B., East St. Louis, Ill.
McRae, Floyd W., Atlanta, Ga.
Means, W. J., Columbus, O.
Meeray, Paul M., Camden, N. J.
Meisenbach, A. G., Alwyd, St. Louis.
Meisenbach, A. H., St. Louis.
Menestrina, Jules F., St. Louis.
Meyer, Willy, New York, N. Y.
Millard, Homer A., Minonk, Ill.
Miller, J. Estill, Pittsfield, Ill.
Miller, J. J. Palmer, Ia.
Miller, R. B., Hinton, W. Va.
Miller, S. H., Joplin, Mo.
Miller, S. M., Peoria, Ill.
Miller, S. R., Knoxville, Tenn.
Mills, W. P., Missoula, Mont.
Milton, Joseph L., Oakland, Cal.
Minassian, H. A., Des Moines, Iowa.
Mitchell, A. A., Lincoln, Neb.
Mitchell, H. C., Carbondale, Ill.
Moe, Anton J., Heron Lake, Minn.
Molz, Chas., Murphysboro, Ill.
Monahan, J. J., Encampment, Wyo.
Montgomery, C. C., Lincoln, Ill.
Montgomery, J. T., Charleston, Ill.
Moore, H. A., Indianapolis.
Moore, James E., Minneapolis.
Moore, John, New York.
Moore, John T., Houston, Texas.
Moore, J. W., St. Louis.
Moore, M. G., Vincennes, Ind.
Moore, R. W., Topeka, Kans.
Moore, Sherwood, St. Louis.
Moore, Wm. L., Truxton, Mo.
Moots, Charles W., Toledo, O.
More, C. W., Fryeleth, Minn.
Morehouse, H., Danville, Ill.
Morris, C. C., St. Louis.
Morrow, Nelson C., Altamont, Kans.
Morrow, W. F., Kansas City, Mo.
Morton, A. W., San Francisco.
Morton, Daniel, St. Joseph, Mo.
Moss, W. F., Maineville, Ohio.
Motter, Thomas Ira, Chicago.
Mudd, Harvey B., St. Louis.
Muir, D. T., Alden, Kans.
Mumford, James G., Boston.
Munger, L. H., Winona, Minn.
Munn, L. H., Topeka, Kans.
Munsch, A. P., St. Louis, Mo.
Murdock, Jr., S., Sabetha, Kans.
Murdy, Robert L., Aberdeen, S. Dak.
Murfree, James B., Murfreesboro, Tenn.
Murphy, E. S., Dixon, Ill.
Murphy, John B., Chicago.
Murray, Dwight H., Syracuse, N. Y.
Murray, S. A., Holden, Mo.
Musselman, J. T., Paris, Ill.
Myer, Max W., St. Louis.
Myerdick, Albert H., St. Louis, Mo.
Nash, Geo. A., Maryville, Mo.

Nave, Henry H., Kansas City, Kan.
Neal, J. R., Springfield, Ill.
Neel, John M., Dallas, Tex.
Neer, E. D., St. Louis.
Nelken, A., New Orleans.
Neville, Eugene J., St. Louis.
Neville, F. A., Meredosia, Ill.
Newcomer, Irving, Petersburg, Ill.
Newman, Samuel S., St. Louis.
Nichols, Schuyler, Herington, Kan.
Nicholson, C. M., St. Louis.
Nicholson, Joseph L., Camden, N. J.
Niedringhaus, Ralph E., Granite City, Ill.
Nietert, H. L., St. Louis.
Nifong, Frank G., Columbia, Mo.
Nihiser, W. M., Hagerstown, Md.
Noble, Robert A., Bloomington, Ill.
Noome, A. J., Wheeling, W. Va.
North, Emmett P., St. Louis.
Norton, M. M., Sunnyside, Ark.
Noyes, A. A., Mason City, Iowa.
Nuzum, Thomas Walter, Janesville, Wis.
Oates, T. K., Martinsburg, W. Va.
Oatman, Louis J., St. Louis.
Ochsner, A. J., Chicago.
Ochsner, Edward H., Chicago.
Oehler, E. F., St. Louis.
Ogden, Chester R., Clarksburg, W. Va.
O'Hara, Fred S., Springfield, Ill.
O'Keefe, John E., Waterloo, Iowa.
Oldham, J. E., Wichita, Kan.
Oliver, John Chadwick, Cincinnati.
Oliver, John H., Kewanee, Ill.
Oliver, John H., Indianapolis.
O'Neil, Richard P., Boston.
O'Reilly, James Archer, St. Louis.
Osborn, J. W., Des Moines, Iowa.
Otrich, G. Cleveland, Belleville, Ill.
Ottis, D. M., Springfield, Ill.
Outten, W. B., St. Louis.
Oven, T. P., Brookfield, Mo.
Owre, Oscar, Minneapolis.
Owsley, Paul O., Kansas City, Mo.
Page, Hugh N., University, Miss.
Palmer, W. L., Albert Lea, Minn.
Park, Geo. M., St. Louis.
Parmeter, Rolland, Detroit, Mich.
Parrish, J. C., Vandalia, Mo.
Parrish, M. P., Decatur, Ill.
Parsons, H. J., Mansfield, La.
Paschal, Frank, San Antonio, Tex.
Pennington, John, Frankfort, Ky.
Paul, Thomas M., St. Joseph, Mo.
Paxon, C. E., Hannibal, Mo.
Payne, Geo. W., Bardwell, Ky.
Pearse, Herman F., San Antonio, Tex.
Pedersen, James, New York.
Pedersen, Victor C., New York.
Pelton, O. L., Elgin, Ill.
Pennington, J. B., Chicago.
Percy, J. F., Galesburg, Ill.
Peters, R. A., Tipton, Iowa.
Pettit, J. A., Portland, Ore.
Peyton, David C., Jeffersonville, Ind.
Phelan, J. R., Oklahoma City, Okla.
Phillips, Chas. E., Canal Zone.
Phillips, G. M., St. Louis.
Pierce, F. E., Chicago.
Pierce, Harry M., St. Louis.
Pitzman, Marsh, St. Louis.
Plondke, F. J., St. Paul, Minn.
Plummer, H. S., Rochester, Minn.
Pollmann, L. P., St. Louis.
Pollmann, Walter H., St. Louis.
Pomerene, H. P., Canton, Ohio.
Pond, Alanson M., Dubuque, Iowa.
Poole, William S., Kansas City, Kan.
Poorman, Bert A., Kansas City, Mo.
Porter, Allen L., Kansas City, Mo.
Porter, Miles F., Ft. Wayne, Ind.
Poston, H. P., Bonne Terre, Mo.
Potter, G. E., Detroit, Mich.
Potter, T. E., St. Joseph, Mo.
Potter, W. W., Westbourne, Tenn.
Powell, E. Wilbur, Omaha, Neb.
Pratt, Chas. E., Wheeling, W. Va.
Prince, Howard L., Byron, N. Y.
Quain, E. P., Bismarck, N. Dak.
Rabenau, P. J., Fordland, Mo.
Rainey, Geo. S., Salem, Ill.
Ramsey, Douglas C., Mt. Vernon, Ind.
Ramsay, John P., Vincennes, Ind.
Rand, Howard F., St. Helena, Cal.
Rassieur, Louis, St. Louis.
Ravenswaar, C. H. van, Boonville, Mo.
Rawls, J. E., Suffolk, Va.
Reber, L. W., St. Louis, Mo.
Reder, F., St. Louis, Mo.
Reed, Charles A. L., Cincinnati.
Reed, Elizabeth Bass, St. Louis.
Reed, Guy P., Davis City, Iowa.
Reed, Robert J., Wheeling, W. Va.
Rees, W. H., Pleasanton, Kan.
Reichmann, Max, Chicago.
Reineking, H., Milwaukee, Wis.
Rendleman, J. W., East St. Louis, Ill.
Renner, C. P., Belleville, Ill.
Reuss, A. LeRoy, Belleville, Ill.
Reyes, William R., Alma, Ark.
Reynolds, C. W., Holton, Kan.
Rhodes, Walter, Toledo, Ill.
Rice, Spencer M., Terre Haute, Ind.
Rich, Charles O'Neill, Omaha, Neb.
Richardson, Maurice H., Boston.
Richardson, W. E., Slayton, Minn.
Richter, H. M., Chicago.
Riddell, John D., Enterprise, Kan.
Rietz, Paul C., Evansville, Ind.
Rigdon, R. L., San Francisco, Cal.
Rinedollar, U., Mt. Carroll, Ill.
Risdon, James Waldo, Leavenworth, Kan.
Risley, C. Howard, Cameron, Mo.
Robbins, Frederick, Detroit.
Robertson, W. M., St. Louis.
Robinson, Fred W., Sturgis, Mich.
Robinson, Samuel, Boston.
Rockafellow, John C., Des Moines, Iowa.
Rockey, A. P., Assumption, Ill.
Rogers, Casmus C., Chicago.
Rogers, Mack, Birmingham, Ala.
Roope, A. P., Columbus, Ind.
Rosenthal, Maurice L., Ft. Wayne, Ind.
Ross, Daniel, Denison, Tex.
Rothrock, M. W., Howell, Ind.
Royster, Hubert A., Raleigh, N. C.
Ruddell, G. W., St. Louis.
Ruffin, Kirkland, Norfolk, Va.
Runyan, J. P., Little Rock, Ark.
Runyan, J. R., Ada, Okla.
Russ, W. R., San Antonio, Tex.
Russell, C. W., Lamar, Colo.
Russler, Jacob J., St. Louis.
Rutledge, John E., Festus, Mo.
Ryan, Lawrence, Chicago.
Sadlier, James E., Poughkeepsie, N. Y.
Safford, W. G., Tarkio, Mo.
St. John, Hugh Roberts, Alton, Kan.
Sala, Eric M., Rock Island, Ill.
Sample, C. H., Saginaw, Mich.
Sampson, F. E., Creston, Iowa.
Sanders, E. M., Nashville, Tenn.
Sanders, St. Julien, Austin, Tex.
Sanders, W. H., Montgomery, Ala.
Sandperl, Harry, St. Louis.
Sarles, W. T., Sparta, Wis.
Sawyer, Alfred D., Fort Fairfield, Me.
Sayle, R. G., Milwaukee, Wis.
Schaefer, Charles N., Pittsburg, Pa.
Schaeffer, Chas. D., Allentown, Pa.
Scheele, M. H., St. Louis.
Scherck, Henry J., St. Louis.
Schery, Chas. Wm., St. Louis.
Schmanss, L. P., Alexandria, Ind.
Schmidt, Richard, Victoria, Mo.
Schoor, Edward, Garden City, Mo.
Schowengerdt, W. E., Champaign, Ill.
Schultz, G. H., Cape Girardeau, Mo.
Schurmeier, F. C., Elgin, Ill.
Schwab, B. C., Sapulpa, Okla.
Schweer, Theodore J., Beardstown, Ill.
Scott, Julien W., Venice, Ill.
Scott, R. G., Geneva, Ill.
Seba, John D., Bland, Mo.
Seelig, M. G., St. Louis.
Sellery, A. C., Long Beach, Cal.
Senn, Wm. N., Chicago.
Sevier, R., Richmond, Mo.
Shaff, J. N., Alton, Ill.
Shankland, James, St. Louis.
Shannon, L. W., Hiawatha, Kan.
Shaw, Joseph, B., Trenton, N. J.
Sherk, Henry H., Pasadena, Cal.
Sherman, Harry M., San Francisco.
Sherwood, Marcel Wesley, Temple, Texas.
Shirley, W. M., Waterloo, Iowa.
Short, John L., Rolla, Mo.
Shutt, Cleveland H., St. Louis.
Shy, D. E., Knobnoster, Mo.
Siegel, John H., Collinsville, Ill.
Silver, David, Pittsburgh, Pa.
Silver, Harry, Cincinnati, Ohio.
Simpson, Albert Ross, Corning, Ark.
Simpson, J., Morrisonville, Ill.
Simpson, Jesse P., Palmer, Ill.
Simpson, T. P., Beaver Falls, Pa.
Singer, Frederic, Pueblo, Colo.
Skinner, Edward Holman, Kansas City, Mo.
Slaughter, Chas. H. P., Philadelphia.
Slayden, John L., Dexter, Mo.
Sloan, Edwin P., Bloomington, Ill.
Sloan, H. E., Cincinnati, O.
Sloan, Orville J., Neosho, Mo.
Small, A. B., Dallas, Tex.
Smedal, Greggar, La Crosse, Wis.
Smith, Albert, Parsons, Kan.
Smith, Clyn, Clovis, N. Mex.
Smith, Carroll, St. Louis.
Smith, C. A., Texarkana, Texas.
Smith, E. O., Cincinnati, Ohio.
Smith Franklin Buchanan, Frederick, Md.
Smith, Harvey S., East St. Louis, Ill.
Smith, James Walter, Hot Springs, Ark.
Smith, Lorin W., Wabash, Ind.
Smith, Oliver C., Hartford, Conn.
Smith, Ralph V., Guthrie, Okla.
Smith, W. F., Clarksville, Ark.
Smoot, J. B., Dallas, Texas.
Smrha, V. V., Milligan Neb.
Southern, Chas. T., Cincinnati.
Sparling, A. M., Sailor Springs, Ill.
Speed, Kellogg, Chicago.
Speer, N. C., Osawatomie, Kans.
Spencer, Floyd H., St. Joseph, Mo.
Spigler, Otto R., Terre Haute, Md.
Spilman, S. A., Ottumwa, Iowa.
Spitzley, Wm. A., Detroit.
Squier, J. Bentley, New York City.
Stamm, M., Fremont, O.
Stanton, R. F., East St. Louis, Ill.
Starkel, Chas. H., Belleville, Ill.
Stauffer, G. W., Akron, O.
Stauffer, William H., St. Louis.
Stealy, J. H., Freeport, Ill.
Steele, A. J., St. Louis.
Steele, D. A. R., Chicago.
Steely, J. B., Chattanooga, Tenn.
Steelsmith, Simon, Abilene, Kans.
Steely, George, Danville, Ill.
Steffenson, O. M., Chicago.
Stetson, G. A., Brenfield, Mass.
Stevens, A. B., Scranton, Pa.
Stevens, Chas. Dillon, St. Louis.
Stewart, Floyd, St. Louis.
Stewart, G. C., Minneapolis.
Stiehl, E. P., Floraville, Ill.
Stigers, P. Elwood, Hancock, Md.
Stokes, Arthur C., Omaha, Neb.
Stoner, A. A., Des Moines, Iowa.
Stratton, Chas. D., Rothville, Mo.
Straus, David C., Chicago.
Straus, D. Leon, St. Louis.
Stremmel, S. C., Macomb, Ill.
Strother, S. P., Alma, Okla.
Sullivan, Arthur G., Madison, Wis.
Sullivan, E. A., Amboy, Ill.
Summa, Henry H., St. Louis.
Summers, A. P., Nashville, Ill.
Summers, Edmund, Mattoon, Ill.
Summers, John E., Omaha, Neb.
Sumpter, Wm. D., Nashville, Tenn.
Sutliff, Wm. A., Walla Walla, Wash.
Sutton, W. S., Kansas City, Kans.
Swartz, Thomas B., Chicago.
Sweetser, H. B., Minneapolis.
Swenson, C. A., Chicago.
Syms, Parker, New York.
Tainter, Frank Joseph, St. Charles, Mo.
Tainter, L. K., Fredericksburg, Texas.
Talbott, E. F., Grinnell, Iowa.
Talbott, Hudson, St. Louis.
Talley, D. F., Birmingham, Ala.
Tanguary, J. H., St. Louis.
Taylor, A. Miles, San Francisco.
Temm, Louis N., St. Louis.
Terry, N. F., Springfield, Mo.
Thrailkill, E. H., Kansas City, Mo.
Thomas, Coughlin William, St. Louis.
Thomas, G. F., Peebles, O.
Thompson, Claude A., Muskogee, Mo.
Thompson, Solomon H., Kansas City, Kans.
Tinker, Martin R., Ithaca, N. Y.
Titterington, M. B., Jerseyville, Ill.
Todd, D. C., St. Louis.
Todd, L. A., St. Joseph, Mo.
Torrance, Loyal B., St. Louis.
Townsend, James Arthur, Union, Mo.
Townsend, Misner R., New York.
Townsend, N. W., New York.
Trucheart, Sterling, Kans.
Tuckerman, J. E., Cleveland.
Tuholske, H., St. Louis.
Tull, G. A., Clay Center, Kan.
Tupper, P. Y., St. Louis.
Turner, R. L., Meridian, Miss.
Tuttle, H. H., Springfield, Ill.
Tyau, Benjamin F., Kaukakee, Ill.
Valentine, Julius John, New York.
Vanatta, H. B., Lerna, Ill.
Vance, A. J., Harrison, Ark.
Vanderveer, Edgar A., Albany, N. Y.
Vanderventer, Vivian H., Ishpeming, Mich.
Van Meter B. F., Lexington, Ky.
Varble, W. M., Jeffersonville, Ind.
Varner, G. W., Evansville, Ind.
Vasterling, Paul F., St. Louis.
Vaughan, John W., St. Louis.
Vaughn, J. Walter, Detroit.
Verne, Y. E., Moorhead, Minn.
Viehe, Carl G., Evansville, Ind.
Vinyard, Paul, St. Louis.
Vosburgh, C. A., St. Louis.
Voyer, Emile Oswald, Minneapolis.
Waechter, Adolph, New York.
Waldner, John Louis, Parkston, S. Dak.
Walker, Alonzo B., Canton, Ohio.
Walker Henry O., Detroit.
Walker, Robert A., Menominee, Mich.
Walker, Robert S., Toledo, O.
Wall, A. S., Champaign, Ill.
Wall, Jr. Otto Augustus, St. Louis.
Wallace, C. H., St. Joseph, Mo.
Walters, Chas. E., Dexter, Mo.
Warfield, Ridgely B., Baltimore, Md.
Warner, Frank, Columbus, O.
Warren, L. P., Wichita, Kans.
Waterworth, S. J., Clearfield, Pa.
Wathen, J. R., Louisville, Ky.
Wathen, William H., Louisville, Ky.
Watson, F. W., Union City, Tenn.
Watson, J. B., Litchfield, Ill.
Weber, Frank J., Olney, Ill.
Weber J. C., Olney, Ill.
Weems, Marcus A., Columbia, Texas.
Weems, Jr., M. L., Brazoria, Texas.
Weidner, M. R., Dalton, Ill.
Weis, Edmund W., Ottawa, Ill.
Wenger, E. S., Lincoln, Nebr.
Wenger, Oliford C., St. Louis.
Werden Van, W., Des Moines, Iowa.
West, Levin, Brunswick, Md.
Wheeler, Carl Lewis, Lexington, Ky.
Wheeler, Jr., Wm. Gray, Park, Ill.
Whitacre, Horace J., Cincinnati, O.
White Herman A., Clinton, Iowa.
White, R. R., Temple, Texas.
White, Wilford W., Verona, O.
Whitmore, W. S., Mt. Sidney, Va.
Whitten, H. H., Peoria, Ill.
Wiatt, William S., East St. Louis, Ill.
Widner, A. W., Newtown, Mo.
Wiedemann, Frank E., Terre Haute, Ind.
Wiggins, J. L., East St. Louis, Ill.
Wilhelmj, Charles F., East St. Louis, Ill.
Will, Arthur A., Oklahoma, Okla.
Will, S. J., Jefferson Barracks, Mo.
Williams, B. G., Oskaloosa, Iowa.
Williams, E. C., Collinsville, Texas.
Williams, Fred S., Wichita, Kans.
Williams, T. J., Hiteman, Iowa.
Williams, W., Quincy, Ill.
Williamson, G. L., Danville, Ill.
Willis, James C., Shreveport, La.
Willson, George C., Nevada, Mo.
Wilson, John B., Ottumwa, Iowa.
Wilson Jefferson R., Beaver, Pa.
Wilson Robert Edward, St. Louis.
Wilson, S. W., Lindsay, Okla.
Winslow, Randolph, Baltimore, Md.
Wishard, Wm. N., Indianapolis, Ind.
Wisner, W. O., Spokane, Wash.
Witherspoon, T. C., Butte, Mont.
Wolbarst, Abraham Leo, New York.
Wolfe, J. N., Mine-Barre, Pa.
Wood, E. A., Sedalia, Mo.
Wood, H. D., Fayetteville, Ark.
Wood, W. C., Decatur, Ill.
Woods, Edmund P., Janesville, Wis.
Woods, William P., Evansville, Ind.
Woodside, E. E., Johnston City, Ill.
Woodward, Wm. C., Washington, D. C.
Woolford, J. S. B., Chattanooga, Tenn.
Woolsey, R. A., St. Louis, Mo.
Work, Jr., James A., Elkhart, Ind.
Worsham, Ludowic, Evansville, Ind.
Worthington, Union, Salt Lake City.
Wight, Arthur L., Carroll, Iowa.
Wright, J. B., Trenton, Mo.
Wright, Leon, Emporia, Kans.
Wyman, Walter, Washington, D. C.
Yancey, E. F., Sedalia, Mo.
Yarbrough, L. A., Covington, Tenn.
Young, W. A., Springfield, Ill.
Yates, John L., Milwaukee, Wis.
Young, M. G., Montour, Ind.
Young, Anthony O., St. Louis.
Young, F. B., Springdale, Ark.
Young, Hugh H., Baltimore, Md.
Young, W. A., Springfield, Ill.
Young, W. G., Grand Rapids, Mich.
Zapffe, Fred C., Chicago.
Zinke, Stanley Gustav, Leavenworth, Kans.
Zinser, Harley A., Washington, Ill.
Zobel, Alfred J., San Francisco.
Zoller, C. H., Granite City, Ill.

Ophthalmology

Adams, A. L., Jacksonville, Ill.
Adams, George C., East St. Louis, Ill.
Alt, Adolph, St. Louis, Mo.
Archer, Minnie C., Houston, Tex.
Ayres, S. C., Cincinnati.
Backenstoe, M. J., Emaus, Pa.
Ball, James Moores, St. Louis.
Banner, C. W., Greensboro, N. C.
Barck, Carl, St. Louis.
Barnes, J. H., Enid, Okla.
Barnett, Mattylee Curl, St. Louis.
Bedell, Arthur J., Albany, N. Y.
Bell, J. Wallace, Kansas City, Mo.
Bell, James Hall, San Antonio, Tex.
Bellows, G. E., Kansas City, Mo.
Bennett, Arthur G., Buffalo, N. Y.
Benson, Geo. E., Minneapolis.
Black, Nelson M., Milwaukee.
Blakesley, T. S., Kansas City, Mo.
Bordley, Jr., James, Baltimore.

Bosse, Edwin H., St. Louis.
Bossidy, John C., Boston.
Bradley, E. H., Peoria, Ill.
Briggs, H. H., Asheville, N. C.
Brobst, C. H., Peoria, Ill.
Brown, E. V. L., Chicago.
Brown, Felix Manning, Hopkinsville, Ky.
Bullard, Robt. L., Springfield, Ill.
Bullitt, James B., University, Miss.
Bulson, Jr., Albert E., Fort Wayne, Ind.
Burroughs, Geo. M., Danielson, Conn.
Campbell, Wm. H., Cincinnati.
Carroll, James J., Baltimore.
Cary, Edward H., Dallas, Texas.
Chamberlin, J. W., St. Paul, Minn.
Charles, Joseph L., St. Louis.
Cline, W., Appleton City, Mo.
Collaswitz, A., St. Louis.
Connor, Leartus, Detroit.
Connor, Ray, Detroit.
Coultas, R. J., Mattoon, Ill.
Curdy, Robert J., Kansas City, Mo.
Davis, A. E., New York.
Dean, Frank W., Council Bluffs, Ia.
Dennis, David, Erie, Pa.
Dickson, J. F., Portland, Ore.
Dodd, Oscar, Chicago.
Donovan, John A., Butte, Mont.
Dorsay, J. G., Wichita, Kans.
Dotson, Walter S., Gallatin, Tenn.
Dowling, Oscar, Shreveport, La.
Duncan, Capt. Wm. A. Vancouver Barracks, Wash.
Dunlap, H. M., Battle Creek, Mich.
Dunn, Jas. V., Cairo, Ill.
Dutton, Chas. King, Moberly, Mo.
Edwards, W. A., La Crosse, Wis.
Ehrhardt, R. T., St. Louis.
Ellis, Bert, Los Angeles, Cal.
Ellett, E. Mc., Memphis, Tenn.
Emerson, Linn, Orange, N. J.
Esterly, Daniel E., Topeka, Kan.
Eure, J. B., Brookfield, Mo.
Ewing, Arthur E., St. Louis.
Faith, Thomas, Chicago.
Feingold, M., New Orleans.
Fischer, Waldermar E., St. Louis.
Fisk, Frank F., Price, Utah.
Forgrave, L. R., St. Joseph, Mo.
Fox, L. Webster, Philadelphia.
Francis, Lee M., Buffalo, N. Y.
Frank, Mortimer, Chicago.
Frantz, Charles P., Burlington, Iowa.
Friedenberg, Percy, New York.
Frisch, Frederick, Buffalo.
Gailey, W. W., Bloomington, Ill.
Gamble, William E., Chicago.
Gibson, Robert D., Youngstown, O.
Gifford, H., Omaha.
Gillum, J. Randolph, Terre Haute, Ind.
Godfrey, F. H., Bloomington, Ill.
Gosney, Charles W., Kansas City, Mo.
Gradle, Henry, Chicago.
Green, Jr., John, St. Louis.
Greene, Louis S., Washington, D. C.
Greenwood, Allen, Boston, Mass.
Gross, Julius H., St. Louis.
Grove, Wm. T., Eureka, Kan.
Gsell, J. F., Wichita, Kan.
Gunn, John C., Belleville, Ill.
Guthrie, Fred A., La Salle, Ill.
Hadley, James W., Frankfort, Ind.
Hagler, Arthur Lee, Springfield, Ill.
Hagler, Elmer E., Springfield, Mo.
Haley, Robert, Brookfield, Mo.
Hall, Sidney S., Ripon, Wis.
Hanna, J. J., Quanah, Tex.
Hardy, W. H., St. Louis.
Haughey, Willfrid, Battle Creek, Mich.
Hayden, A. A., Chicago.
Heitzer, Joseph Daniel, Bedford, Ind.
Henderson, Frank L., St. Louis.
Harron, J. T., Jackson, Tenn.
Hill, Hermon C., Benton Harbor, Mich.
Hogsett, C. Y., Ft. Worth, Texas.
Hoose, Albert, St. Louis.
Hornback, E. T., Hannibal, Mo.
Howard, W. L., Greenville, Miss.
Howe, Lucien, Buffalo.
Huffman, D. W., Crane, Mo.
Hughes, Harry S., St. Louis.
Hulse, Yard H., Houston, Texas.
Irwin, V. J., Springfield, Mass.
Jackson, Edward, Denver, Colo.
Jay, M. T., Portland, Ind.
Jennings, J. Ellis, St. Louis.
Jervey, J. W., Greenville, S. C.
Johns, W. A., Corinth, Miss.
Jones, E. L., Cumberland, Md.
Kelly, J. C., Mitchell, Ind.
Kelly, Sam G., Sedalia, Mo.
Kenney, W. L., St. Joe, Mo.
Knapp, Arnold, New York.
Knapp, George, Vincennes, Ind.
Knapp, H. C., Huntingburg, Ind.
Kimberlin, J. W., Kansas City, Mo.
Kipp, Charles J., Newark, N. J.
La Force, B. D., Ottumwa, Iowa.
La Force, E. Frank, Burlington, Iowa.
Lapsley, Robt. M., Keokuk, Iowa.
Leach, W. J., New Albany, Ind.
Ledbetter, S. L., Birmingham, Ala.
Leonard, P. I., St. Joseph, Mo.
Lesage, Charles A. E., Dixon, Ill.
Lewis, E. J., Sauk Center, Minn.
Lewis, F. Park., Buffalo.
Lichtenberg, Jos. S., Kansas City, Mo.
Lightner, C. R., St. Louis.
Loeb, Clarence, St. Louis.
Louchery, D. C., Clarksburg, W. Va.
Love, Frank W., Buffalo, N. Y.
Luedde, William H., St. Louis.
Lynch, J. L., Winona, Minn.
Magoon, Frank L., St. Louis.
Magruder, A. C., Colorado Springs, Colo.
Mann, R. H. T., Texarkana, Ark.
March, Clara Ann, Buffalo, N. Y.
Marsden, Henry, I., Somerset, Pa.
Martin, H. H., Savannah, Ga.
Maser, G. W., Parsons, Kans.
Matherly, R. C., Galesburg, Ill.
May, James W., Kansas City, Kan.
McAlester, Jr., A. W., Kansas City, Mo.
McBride, W. O., Joliet, Ill.
McClelland, Clarence E., Decatur, Ill.
McDavitt, Thos., St. Paul, Minn.
McGirt, John I., Beatrice, Mo.
McIntire, Charles, Easton, Pa.
McLemore, T., Neosho, Mo.
Meanor, William C., Beaver, Pa.
Meyer, J. H. Wm., La Porte, Ind.
Middleton, A. B., Pontiac, Ill.
Miller, Chas. E., Muncie, Ind.
Miller, R. F., St. Louis, Mo.
Miller, Robert W., Los Angeles.
Minor, Charles L., Springfield, Ohio.
Moore, Thos. W., Huntington, W. Va.
Morris, Robt. H., Linneus, Mo.
Morrison, Frank A., Indianapolis.
Morse, H. Beach, Bay City, Mich.
Moulton, Herbert, Fort Smith, Ark.
Muetze, Henry, St. Louis.
Nance, Willis O., Chicago.
Norris, Edwin J., St. Louis, Mo.
Noyes, Guy L., Columbia, Mo.
Orendorff, Otis, Canon City, Colo.
Owen, W. C., St. Louis.
Paine, George F., St. Louis, Mo.
Parker, Frederick P., St. Louis.
Parker, Walter R., Detroit.
Parrish, E. E., Memphis, Mo.
Penn, Benj. S., Humboldt, Tenn.
Pingel, Adolph O., Louisville, Ky.
Posey, Wm. Campbell, Philadelphia.
Post, M. H., St. Louis.
Powers, Everett, Carthage, Mo.
Pratt, John A., Aurora, Ill.
Prince, A. E., Springfield, Ill.
Pusey, Brown, Chicago.
Ramsey, J. Wilson, Jonesboro, Ark.
Randolph, R. L., Baltimore, Md.
Rauly, John, Cincinnati.
Ray, J. M., Louisville, Ky.
Reber, Wendell, Philadelphia.
Reding, H., Lawrence, Kans.
Reed W. M., Kansas City, Mo.
Rein, Hugo, St. Louis.
Rinehart, H. D., Dayton, Ohio.
Rogers, G. M. F., Austin, Minn.
Rowley, Frances, Galveston, Texas.
Sanders, Frank L., Kansas City, Mo.
Sanderson, Hermon H., Detroit.
Savage, G. C., Nashville, Tenn.
Savage, H. G. Savage, Warsaw, Mo.
Saxl Ernst, St. Louis.
Scales, J. W., Pine Bluff, Ark.
Schneider, G. J., Elgin, Ill.
Schultz, N. H., Kansas City, Mo.
Semple, S. M., St. Louis.
Shahan, William Ewing, St. Louis.
Shannon, C. E. G., Philadelphia, Pa.
Shastid, Wm. K., Pittsfield, Ill.
Shelton, J. C., Chillicothe, Mo.
Shoemaker, J. F., St. Louis.
Shoemaker, W. A., St. Louis.
Shore, F. E. V., Des Moines, Iowa.
Simpson, John D., Minneapolis.
Sites, J. McKee, Martinsburg, W. Va.
Smith, J. Whitefield, Bloomington, Ill.
Smith, Owen A., Farmington, Mo.
Smith, U. S., Hannibal, Mo.
Snyder, Walter H., Toledo, Ohio.
Spitze, Edward C., East St. Louis, Ill.
Stevens, Cyrus Lee, Athens, Pa.
Stevenson, David W., Richmond, Ind.
Stevenson, Mark D., Akron, Ohio.
Stillson, J. O., Indianapolis.
Stilwill, Hiram R., Denver.
Summers, J. W., Walla Walla, Wash.
Swan, C. J., Chicago.
Tarun, Wm., Baltimore, Md.
Taugher, A. J., Milwaukee.
Taylor, Lewis H., Wilkes-Barre, Pa.
Thompson, J. L., Indianapolis.
Thomson, Edgar S., New York.
Thorington, James, Philadelphia.
Thorpe, Lewis S., Los Angeles.
Tiffany, Flavel B., Kansas City, Mo.
Todd, Frank C., Minneapolis.
Todd, S. Gordon, Neenah, Wis.
Tydings, O., Chicago.
Vail, Derrick T., Cincinnati.
Vanderhoof, Don A., Rockford, Ill.
Van Slyke, F. W., St. Paul, Minn.
Vinsonhaler, Frank, Little Rock, Ark.
Voight, C. B., Mattoon, Ill.
Vollmer, Karl, Davenport, Iowa.
Walter, Will, Chicago.
Weed, Harry M., Buffalo.
Weeks, John E., New York.
Wescott, Cassius D., Chicago.
Wever, John S., Kansas City, Mo.
White, Joseph A., Richmond, Va.
Wilder, William H., Chicago.
Wirner, Meyer, St. Louis.
Williams, Charles H., Boston.
Williamson, Llewellyn, St. Louis.
Wolfenstein, Leo, Cleveland.
Wolfner, Henry L., St. Louis.
Wood, Casey A., Chicago.
Woodruff, F. E., St. Louis.
Woodruff, Thomas A., Chicago.
Woods, Hiram, Baltimore.
Workman, R. E., Woodward, Okla.
Wright, John W., Columbus, Ohio.
Wright, Sherman E., Marinette, Wis.
Wyatt, William Walter, Peoria, Ill.
Wyler, Jesse S., Cincinnati.
Yereman, O. H., Kansas City, Kans.
Young, H. C., Bloomfield, Iowa.
Yount, W. E., Cape Girardeau, Mo.
Zieber, W. H., Queen City, Mo.
Ziegler, S. Lewis, Philadelphia.
Zentmayer, William, Philadelphia.
Zorger, Annie L., Champaign, Ill.
Zugg, Clarence L., Kansas City, Kans.

Laryngology and Otology

Ahlers, O. C., Sherman, Texas.
Anderson, W. B., Brownwood, Tex.
Andrews, Willis C., Detroit, Mich.
Andrews, Albert H., Chicago.
Alway, R. D., Aberdeen, S. Dak.
Auten, Frank E., Belleville, Ill.
Ballinger, William Lincoln, Chicago.
Barclay, Robert, St. Louis.
Bardenheier, F. G. A., St. Louis.
Barnes, Algernon S., Jr., St. Louis.
Bartholomew, A. Bend, Ind.
Beck, Joseph C., Chicago.
Biewend, E. F., St. Louis.
Black, William D., St. Louis.
Boot, G. Hammond, Ill.
Boyd, Frank D., Ft. Worth, Texas.
Bradley, Arthur H., St. Louis.
Brodrick, F. W., Sterling, Ill.
Broge, Louis D., Evansville, Ind.
Brown, Clayton M., Buffalo, N. Y.
Brown, Frederick I., Chicago.
Bryan, Wm. M. C., St. Louis.
Bryant, W. Sohier, New York.
Burke, Chas. L., Kansas City, Mo.
Caldwell, Robert, Little Rock, Ark.
Canfield, R. B., Ann Arbor, Mich.
Caplan, L., St. Louis.
Casselberry, W. F., Chicago.
Cott, Geo. F., Buffalo, N. Y.
Craig, Alex. R., Philadelphia, Pa.
Creveling, H. Clay, St. Louis.
Cushman, M. L., Lansing, Mich.
Dames, Alphonse F., St. Louis.
Davis, Chas. L., Robinson, Ill.
Davis, George E., New York.
Dean, Lee Wallace, Kansas City, Ia.
Decherd, Henry B., Dallas, Texas.
Dench, Edward Bradford, New York.
Devilbiss, Allen, Toledo, Ohio.
Duel, Arthur York.
Emerson, Francis P., Boston.
Farrell, P. J. H., Chicago.
Fletcher, J. R., Chicago.
Foreman, J. W., Jonesburg, Mo.
Foster, John H., Houston, Texas.
Fowler, Samuel R., St. Louis.
Freer, Otto T., Chicago.
Garraghan, Edward F., Chicago.
Geiger, Arthur H., Chicago.
Gillespie, G. B., Covington, Tenn.
Glogau, Otto, New York.
Goldstein, Max A., St. Louis.
Good, R. H., Chicago.
Goodman, Daniel Carson, St. Louis.
Greene, Joseph B., Asheville, N. C.
Griffith, D. M., Owensboro, Ky.
Grubbs, S. B., San Juan, Porto Rico.
Guggenheim, L. K., St. Louis.
Hall, D. Walton, Kansas City, Mo.
Hall, Gaylord C., Louisville, Ky.
Hall, H. R., St. Louis.
Hall, W. T., Tarentum, Pa.
Higgins, Samuel G., Milwaukee, Wis.
Hill, H. B., Logansport, Ind.
Hitz, Henry B., Milwaukee, Wis.
Hogue, Delos W., Springfield, Ohio.
Horn, Henry, San Francisco, Cal.
Howell, John C., Hannibal, Mo.
Huey, Thomas F., Anniston, Ala.
Ingals, E. Fletcher, Chicago.
Jackson, Chevalier, Pittsburg, Pa.
James, John A., St. Louis.
Johnson, H. R., Fairmont, W. Va.
Johnson, W. L., St. Louis.
Kalar, Sara Blaine, Bloomfield, Neb.
Kelley, I. D., Jr., St. Louis.
Kelly, M. B., Wheeling, W. Va.
Kempff, Louis A., St. Louis.
Kepke, John, Brooklyn, N. Y.
Kimball, Z. Y., Hillsboro, Ill.
Klokke, W. Emil, St. Louis.
Koetter, Albert F., St. Louis.
Kyle, D. Braden, Philadelphia.
Kyle, John J., Indianapolis, Ind.
Lave, Frank L., Iowa City, Iowa.
Layman, Daniel W., Indianapolis.
Leary, T. A., St. Louis.
Lee, Daniel R., Arcadia, Neb.
Lemere, Henry B., Omaha, Neb.
Lester, Harry S., Streator, Ill.
Levy, Robert, Denver.
Lewis, Eugene R., Dubuque, Iowa.
Littig, John V., Davenport, Iowa.
Loeb, Hanau W., St. Louis.
Logan, James A., Kansas City, Mo.
Lyman, H. W., St. Louis.
Magee, R. S., Topeka, Kan.
Marquis, George Paull, Chicago.
Matthews, Jonah, Duluth, Minn.
Mason, William B., Washington, D.C.
McAllister, J. C., Ridgway, Pa.
McDonald, W. B., New Augusta, Ind.
McKinney, Richmond, Memphis, Tenn.
Menge, Frederick, Chicago.
Miller, Clifton M., Richmond, Va.
Miller, H. Edward, St. Louis.
Millette, J. W., Dayton, Ohio.
Miner, Stanley G., Detroit, Mich.
Mithoefer, Wm., Cincinnati.
Murphy, John W., Cincinnati.
Murray, Wm. R., Minneapolis.
Neuman, Daniel S., Denver.
Newhart, Horace, Minneapolis.
Odell, Anna, Detroit, Mich.
O'Keller, P. P., New Orleans.
Oren, Samuel A., Lewistown, Ill.
Osgood, C. F., Ogden, Utah.
Page, Lafayette, Indianapolis, Ind.
Parker, Wm. W., Des Moines, Iowa.
Pingsten, C. F., St. Louis.
Pierce, Norval H., Chicago.
Purcell, C. E., Paducah, Ky.
Pyfer, Howard Newton, Pa.
Reik, J. N., Baltimore, Md.
Reynold, H. G., Paducah, Ky.
Rhodes, John Edwin, Chicago.
Roe, John O., Rochester, N. Y.
Roy, Dunbar, Atlanta, Ga.
Sandels, C. C., Pittsburg, Pa.
Sauer, William E., St. Louis.
Scantlebury, Kansas City, Kan.
Scholz, Ray Ph., St. Louis.
Shallcross, W. G., Pittsburg, Pa.
Shambaugh, George E., Chicago.
Shapleigh, J. B., St. Louis.
Shodd, J. Z., North Conway, N. H.
Sheedy, Bryan D., New York.
Shelley, O. C., Independence, Mo.
Shirk, George Wynn, Cornwall-on-Hudson, N. Y.
Short, Z. N., Hot Springs, Ark.
Shumate, D. L., Kansas City, Mo.
Sharly, Burt Russell, Detroit, Mich.
Simon, F. A., St. Louis.
Skillern, Ross Hall, Philadelphia.
Sluder, Greenfield, St. Louis.
Smith, J. Campbell, St. Louis.
Smith, S. MacCuen, Philadelphia.
Spencer, H. N., St. Louis.
Spencer, Selden, St. Louis.
Staley, Clinton, Enfield, Ill.
Stein, Otto J., Chicago.
Stucky, J. A., Lexington, Ky.
Terrell, S. L., Dallas, Texas.
Thomasson, W. J., Newport, Ky.
Thrasher, A. B., Cincinnati, Ohio.
Titsworth, Guy, Sedalia, Mo.
Tomlin, Wm. S., Indianapolis, Ind.
Torrison, George A., Chicago.
Turenne, Herbert, Kansas City, Mo.
Vaughan, G. E., Clarksville, Tenn.
Voorhees, Sherman, Elmira, N. Y.
Von-der-Au, O. L., St. Louis.
Welty, Cullen F., San Francisco.
Wheeler, W. S., Kansas City, Mo.
Wilson, Charles A., St. Louis.
Wintermute, G. P., Oakland, Cal.
Wyche, Charles, St. Louis.

Nervous and Mental Diseases

Anderson, C. H., Menard, Ill.
Anderson, Frank M., Decatur, Ill.
Aplin, Floyd W., Waukesha, Wis.
Babcock, James W., Columbia, S. C.
Barstow, James M., Council Bluffs, Ia.
Bassoe, Peter, Chicago.
Beebe, Brooks F., Cincinnati.
Bentom, G. H., Chester, W. Va.
Bilse, B. A., St. Louis.
Booth, David S., St. Louis.
Bowe, Edward, Jacksonville, Ill.
Bradburn, B. P., Lincoln, Ill.
Bradley, J. M., St. Louis.
Brady, E. J., Kalamazoo, Mich.
Briggs, L. Vernon, Boston.
Brown, Arthur C. F., St. Louis.
Brown, Sanger, Chicago.
Burnett, S. Grover, Kansas City, Mo.
Burnham, A. F., Mason City, Ill.
Caldwell, C. B., Lincoln, Ill.
Campbell, Given, St. Louis.
Cardwell, Mae H. Whitney, Portland, Ore.
Chavigny, C. U., New Orleans.
Church, Archibald, Chicago.
Collins, Joseph, New York.
Cooney, Henry C., Princeton, Minn.
Courtney, J. Elvin, Denver.
Cowle, Fannie W., Hot Springs, Ark.
Dana, Charles L., New York.
Darling, Ulysses Grant, Chicago.
Diller, Theodore, Pittsburg.
Doolittle, John C., Des Moines, Ia.
Edwards, Nashville, Tenn.
Fairchild, Statella F., St. Louis.
Farmer, Percy J., St. Louis.
Folkes, H. M., Biloxi, Miss.
Fry, Frank R., St. Louis.
Goddard, C. C., Leavenworth, Kan.
Graves, William W., St. Louis.
Grinker, Julius, Chicago.
Hall, George W., Chicago.
Hamilton, Arthur S., Minneapolis.
Hardt, H. G., Lincoln, Ill.
Haywood, Charles W., Elkhart, Ind.
Hazen, Charles Mc., Bon Air, Va.
Hecht, D'Orsay, Chicago.
Hermann, H. W., St. Louis.
Hoffman, Geo. E., Logansport, Ind.
Hoge, M. W., St. Louis, Mo.
Hoppe, Herman H., Cincinnati.
Hughes, Chas. H., St. Louis.
Hughes, Marc Ray, St. Louis.
Hummel, E. J., New Orleans.
Ires, A. W., Detroit, Mich.
Johnson, C. W., Litchfield, Ill.
Jones, W. A., Minneapolis.
Kempker, J. F., Davenport, Iowa.
Lane, E. H., East St. Louis, Ill.
Langdon, F. W., Cincinnati.
Leonard, M. W., Akron, Ohio.
Lichty, Daniel, Rockford, Ill.
Lindsay, W. S., Topeka, Kan.
Mason, Lewis D., Brooklyn, N. Y.
Mayer, Edward E., Pittsburg, Pa.
McBride, James H., Pasadena, Cal.
McCready, E. B., Pittsburg, Pa.
Mettler, L. Harrison, Chicago.
Mohrer, Geo. A., Denver.
Moody, G. H., San Antonio, Tex.
Moore, Richard C., Omaha, Neb.
Moren, Jno. J., Louisville, Ky.
Morriss, Zemelle E., Stockport, Ia.
Moyer, Harold N., Chicago.
Norbury, Frank P., Kankakee, Ill.
Parsonnet, Victor, Newark, N. J.
Perry, M. L., Parsons, Kan.
Pettey, Geo. E., Memphis, Tenn.
Ponton, John, Kansas City, Mo.
Robinson, J. F., Nevada, Mo.
Rodenbaugh, H., Columbus, O.
Rucker, S. T., Memphis, Tenn.
St. Clair, F. E. E., Hampton, Ia.
Sanders, C. A., Marble Hill, Mo.
Sanders, Karl D., Jonesboro, Ill.
Schwab, Sidney I., St. Louis.
Sherman, E. Amelia, McGregor, Ia.
Singer, H. Douglas, Kankakee, Ill.
Skoog, A. L., Kansas City, Mo.
Snow, Haldor, St. Paul, Minn.
Spink, Urbana, Indianapolis, Ind.
Stephenson, Frank H., Syracuse, N. Y.
Sterne, Albert E., Indianapolis, Ind.
Stevens, Frank M., Mt. Pleasant, Ia.
Sweeney, Arthur, St. Paul, Minn.
Taylor, Lewis C., Springfield, Ill.
Thierry, Charles W., St. Louis.
Todd, Frank L., Chicago.
Treadway, Walter L., Jacksonville, Ill.
Trusler, Leslie S., Oakland City, Ind.
Turner, R. F., Memphis, Tenn.
Turner, Jno. Dallas, Texas.
Twohey, John J., Buffalo, N. Y.
Uhls, L. L., Osawatomie, Kan.
Voldeng, M. N., Cherokee, Iowa.
Wallace, H. R., Alton, Ill.
Wallace, I. S., Bunker Hill, Ind.
Webster, Edgar M., Chicago.
Wingerter, C. A., Wheeling, W. Va.
Woodson, C. H., St. Joseph, Mo.
Work, Hubert, Pueblo, Colo.
Zenner, Philip, Cincinnati.

Preventive Medicine and Public Health

Adelsberger, Louis, Waterloo, Ill.
Akerley, A. W., Milwaukee, Wis.
Arms, B. L., Boston.
Bagby, B. H., West Point, Va.
Barnes, Carl L., Chicago.
Batt, Wilmer R., Harrisburg, Pa.
Best, E. H., Freeport, Ill.
Bishop, Frances L., St. Louis.
Bond, H. W., St. Louis.
Brossard, Pierre M., Maplewood, Mo.
Cameron, Solon, St. Louis.
Clemmer, J. W., Columbus, Ohio.
Cohen, Hyman, Chicago.
Colwell, N. P., Chicago.
Crothers, T. D., Hartford, Conn.
Crowder, Thomas R., Chicago.
Davis, Effa V., Chicago.
DeLamater, Hasbrouck, Kansas City, Mo.
Dodds, William T. S., Indianapolis.
Dunn, Wm. L., Asheville, N. C.
Dutton, Frederick Earnest, Pa.
Egan, James A., Springfield, Ill.
Egbert, Seneca, Philadelphia.
Evans, W. A., Chicago.
Fierbaugh, Harvey C., Harrisonburg, Va.
Florence, J. H., Houston, Tex.
Freeman, Allen W., Richmond, Va.
Garrigue, Evelyn, New York.
Gehrmann, Adolph, Chicago.
Godfrey, Edward S., Jr., Phoenix, Ariz.
Goodwin, E. J., St. Louis.
Gorgas, W. C., Ancon, Canal Zone, Panama.
Grant, W. Ed, Louisville, Ky.
Greene, Frances Marx, Brookline, Mass.
Griffith, T. H. D., Springfield, Ill.
Hemenway, Henry B., Evanston, Ill.
Hicks, J. R., Covington, Ind.
Hill, Hibbert Winslow, Minneapolis.
Hitchens, A. Parker, Glenolden, Pa.
Hodskon, E. W., Mountainview, N. H.
Homan, George, St. Louis.
Howard, D. C., Washington, D. C.
Hurty, J. N., Indianapolis.
Hyde, E. E., Chicago.
Ireland, Major M. W., Washington, D. C.
Irwin, Charles B., Kansas City, Mo.
Jones, C. Hampson, Baltimore.
Jones, Philip Mills, San Francisco.
Kerr, J. W., Washington, D. C.
King, J. E., Richmond, Ind.
Kirk, J. W., Oblong, Ill.
Koehler, Gottfried, Chicago.
Kohlheim, Louis, Guntown, Miss.
Leathers, Walter S., University, Miss.
Lingenfelter, Julius, St. Louis.
Long, John D., Washington, D. C.
MacLaren, J. D., Norman, Okla.
Magruder, G. Lloyd, Washington, D. C.
Marnell, F. S., Nebraska City, Neb.
Marner, G. P., Marion, Kan.
Martin, Elizabeth L., Pittsburg, Pa.
Montgomery, Liston Homer, Chicago.
Morfit, John C., St. Louis.
Morrow, Prince A., New York.
Morton, Rosalie Slaughter, New York.
Müller, J. A., Snyder, Okla.
Overholser, M. P., Morrisonville, Mo.
Porter, William, St. Louis.
Price, Marshall Langton, Baltimore.
Quigley, D. T., North Platte, Neb.
Ravenel, Mazyck, Madison, Wis.
Rawlings, I. D., Chicago.
Rea, Robt. W., Plattsburg, Mo.
Reynolds, Arthur R., Chicago.
Richmond, W. W., Clinton, Ky.
Riddle, Julia, Oshkosh, Wis.
Royer, B. Franklin, Harrisburg, Pa.
Sherbon, Florence Brown, Colfax, Iowa.
Snow, William F., Stanford University, Cal.
Snyder, Major Henry D., St. Louis.
Stanton, Samuel Cecil, Chicago.
Taylor, C. F., Philadelphia.
Taylor, Holman, Fort Worth, Tex.
Thornton, C. W., Dalhart, Tex.
Tonney, F. O., Chicago.
Townsend, Pauline Myers, Marshalltown, Iowa.
Tucker, B. G., Nashville, Tenn.
Tuttle, T. D., Helena, Mont.
Ward, Ida Bruce, Georgetown, D. C.
Warren, Benjamin S., St. Louis.
White, Joseph H., New Orleans.
Williams, Dudley B., Osceola, Mo.
Woodyard, S. W., Greeneville, Tenn.
Young, G. B., Chicago.
Young, Jno. W., Grenada, Miss.

Stomatology

Adair, Joseph M., Claypool, Ky.
Alcorn, Edward, Hustonville, Ky.
Allen, John M., Liberty, Mo.
Anderson, Albert, Raleigh, N. C.
Barber, Moses B., Flat River, Mo.
Bethel, L. P., Columbus, Ohio.
Brophy, Truman W., Chicago.
Brown, George V. I., Milwaukee, Wis.
Carter, Joseph J., Weston, Mo.
Cook, George, Concord, N. H.
Corum, John R., Ashbyburg, Ky.
Creel, Milton P., Central City, Ky.
Dorsey, J. S., East Prairie, Mo.
Fisher, William C., New York.
Fletcher, M. H., Cincinnati.
Fowler, Wm., Alderson, Okla.
Garrabrant, Clarence, Atlantic City, N. J.
Geary, H. Logan, Seattle, Wash.
Gilmer, Thos. L., Chicago.
Gray, J. P., Nashville, Tenn.
Griffin, P. Henry, St. Louis.
Harrison, A. M., Lees Summit, Mo.
Hanson, H., Des Peres, Mo.
Hunt, Chas., Clinton, Ky.
Lischer, B. E., St. Louis.
Loeb, Virgil, St. Louis.
Long, Jesse, Minneapolis.
Marchman, Oscar M., Dallas, Tex.
Maische, August F., Manchester, Mo.
McClanahan, J. M., Guilford, Mo.
McCurdy, Stewart L., Pittsburg.
McRee, W. C., Trenton, Tenn.
McTate, Joseph C., Meadville, Pa.
Moore, P. A., Jordan, Ky.
Moorehead, F. B., Chicago.
Munson, C. L., St. Louis.
Neumann, Wm. H., Lewiston, Minn.
Noyes, Frederick B., Chicago.
Potts, Herbert A., Chicago.
Power, James E., Providence, R. I.
Presnell, C. C., Desoto, Mo.
Prinz, Hermann, St. Louis.
Reid, H. L., Charleston, Mo.
Riedy, James A., Monongah, W. Va.
Schmalhorst, D. E., St. Louis.
Smith, G. C., Boston.
Smith, W. B., Fairland, Okla.
Soper, H. W., St. Louis.
Stiff, F. W., Richmond, Va.
Talbot, Eugene S., Chicago.
Thomas, J. Smith, Pleasant Hill, Ill.
Thorpe, Burton Lee, St. Louis.
Treuyn, Wm. Thos., Peoria, Ill.
White, Geo. W., Oakland, Ky.

Diseases of Children

Abt, Isaac, A., Chicago.
Alexander, J. D., Tiptonville, Tenn.
Allin, Frank R., Chicago.
Anderson, C. A., Stromsburg, Neb.
Andrews, Leila E., Oklahoma City, Okla.
Barker, William Shirmer, St. Louis.
Bartlett, Elmer E., Lamar, Colo.
Bartley, E. H., Brooklyn.
Bebb, Walter S., Downers Grove, Ill.
Bernheim, Louis, Butte, Mont.
Black, Robt. A., Chicago.
Blair, B. H., Lebanon, Ohio.
Bleyer, A. S., St. Louis.
Bolt, Richard A., Cleveland.
Brady, John M., St. Louis.
Bridger, James D., Memphis, Tenn.
Brown, Alice Marlow, Chicago.
Brown, Orland J., North Adams, Mass.
Brucker, Charles M., Tell City, Ind.
Butler, William J., Chicago.
Caldwell, John C., East St. Louis, Ill.
Campbell, J. A., Wheeling, W. Va.
Cattermole, Geo. H., Boulder, Colo.
Chener, H. W., Chicago.
Churchill, Frank S., Chicago.
Clemens, James Ross, St. Louis.
Coit, Henry L., Newark, N. J.
Cornell, C. W., Knoxville, Iowa.
Cook, E. A., Upper Alton, Ill.
Cooksey, William P., Atlanta, Ark.
Cotton, Alfred C., Chicago.
Davis, Clara M., Lansing, Mich.
DeBuys, L. R., New Orleans.
Deziel, Godfrey, Minneapolis.
Dodson, John Milton, Chicago.
Douglas, Chas., Detroit.
Earle, Clarence A., Des Plaines, Ill.
Edwards, Ogden M., Jr., Pittsburg, Pa.
Edwards, Wm., Bowdle, S. Dak.
Elterich, Theodore J., Pittsburg, Pa.
Ford, Alice Porter, New Haven, Conn.
Forgrave, Harrison S., St. Joseph, Mo.
Friedlander, Alfred, Cincinnati.
Garlinghouse, Orestes L., Iola, Kan.
Gengenbach, Frank P., Denver, Colo.
Gordon, F. N., St. Louis.
Graham, Edwin E., Philadelphia.
Gray, Isabel, St. Louis.
Grote, Wm. F. H., St. Louis.
Hall, Elizabeth, Carthage, Mo.
Hamill, S. McC., Philadelphia.
Harkey, William Cathey, Kansas City, Mo.
Harral, W. E., St. Louis.
Hereford, Will D., St. Albans, W. Va.
Hines, Edgar A., Seneca, S. C.
Hockman, B. F., Sumner, Ill.
Holmes, Arthur D., Detroit.
Hoskins, W. D., Indianapolis.
Hough, Charles Pinckney, Jefferson City, Mo.
Houston, R. E., Greenville, S. C.
Howland, John, New York.
Hughes, W. L., Indiana Harbor, Ind.
Humphrey, J. H., St. Louis.
Jackson, John B., Kalamazoo, Mich.
Jacobi, Abraham, New York.
Johnstone, Mary M. S., Chicago.
Jones, Arch D., Wichita, Kan.
Jones, Eleanor C., Philadelphia.
Jones, R. P., Clinton, La.
Jouett, Arthur H., St. Louis.
Kelley, Samuel W., Cleveland.
Kerley, Charles Gilmore, New York.
King, Jesse A., Victoria, Ill.
Klein, Sebastian, St. Louis.
Kopfstein, F. T., Cleveland.
Kuhn, Daniel, St. Louis.
Lacey, J. H., Albion, Ill.
Lackner, Ernest, Chicago.
Lamb, Frank H., Cincinnati.
Lenty, D. E., Farmington, Wash.
Leopold, Jerome S., New York.
Levy, Aaron, St. Louis.
Lippe, Meyer J., St. Louis.
Lippmann, G., St. Louis.
Lock, James S., Harbourville, Ky.
Lowenstein, H. M., St. Louis.
Long, Eli, New York.
Martin, Charles P., St. Louis.
Martin, Tilly A., St. Louis.
McClanahan, Harry M., Omaha, Neb.
McNeill, H. L., Newman, Ill.
McVea, Charles, Baton Rouge, La.
Meng, Edwin R., St. Louis.
Merrill, Julia D., Chicago.
Merriman, C. S., Kansas City, Mo.
Miller, W. H., Macon, Mo.
Milligan, Josephine, Jacksonville, Ill.
Mitchell, Esther, Shawnee, Okla.
Moore, M., Cleveland.
Moore, O. T., St. Louis.
Morse, John Lovett, Boston.
Myers, Albert William, Milwaukee, Wis.
Neff, Frank C., Kansas City, Mo.
Neece, Thos. C., Walnut Ridge, Ark.
Newkirk, Jessie Slavens, Kansas City, Kan.
Noonan, C. J., Brooklyn.
Parker, Thos. D., Birmingham, Ala.
Pierson, Allen, Spencer, Ind.
Pisek, Godfrey R., New York.
Pollock, Robert, Cleveland.
Porteous, Edward J., Atlantic City, N. J.
Redden, Thomas O., Joliet ville, Ind.
Reich, J. L., Wagoner, Okla.
Richardson, Katharine B., Kansas City, Mo.
Rittenhouse, Walter, Lake Geneva, Wis.
Roberts, Roy B., Brimfield, Ill.
Robichaux, E. C., Excelsior Springs, Mo.
Rosamond, J. H. E., Memphis, Tenn.
Rotteck, Julius, St. Louis.
Rowland, R. S., Detroit.
Royster, L. T., Norfolk, Va.
Russell, James M., Monett, Mo.
Sedgwick, J. P., Minneapolis.
Sennott, John S., Waterloo, Ill.
Shulean, Nellie S., Cambridge, Minn.
Shuler, Anne Mary, Davenport, Ia.
Sill, E. Mather, New York.
Smead, Herbert E., Toledo, Ohio.
Smith, E. S., Macon, Mo.
Smith, Morgan, Little Rock, Ark.
Snell, M. W., Litchfield, Ill.
Snyder, J. Ross, Birmingham, Ala.
Southworth, Thomas S., New York.
Spinzig, Felix, St. Louis.
Stevens, Corbin D., Magnolia, Ark.
Stewart, James, St. Louis.
Talbot, Fritz B., Boston.

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Thomas, J. J., Cleveland.
Thompson, H. H., Noblesville, Ind.
Tooker, Charles W., St. Louis.
Townsend, H. S., Buffalo, N. Y.
Troutt, E. C., Birds, Ill.
Tuley, Henry Enos, Louisville, Ky.
Tuttle, George M., St. Louis.
Twitchell, B. E., Belleville, Ill.
Vores, C. Preston, Unionville, Mo.
Vander Bogert, Frank, Schenectady, N. Y.
Vandersllce, J. W., Oak Park, Ill.
VanWinkle, J. W., Chicago.
Wahrer, C. F., Fort Madison, Ia.
Walker, Alfred A., Birmingham, Ala.
Wells, J. W., Waltonville, Ill.
Wood, C. Martin, Decatur, Ill.
Work, James Anderson, Elkhart, Ind.
Wynkoop, Edward J., Syracuse, N. Y.
Young, Josephine E., Chicago.
Zahorsky, John, St. Louis.

Dermatology

Allen, Kotz, Memphis, Tenn.
Ankrim, L. F., Pittsburgh, Pa.
Baer, Clarence Allen, Milwaukee.
Bathhurst, Wm. R., Little Rock, Ark.
Baum, William L., Chicago.
Brayton, A. W., Indianapolis.
Brosius, William Lewis, Gallatin, Mo.
Brown, Geo. S., Conway, Ark.
Collings, Howard P., Hot Springs, Ark.
Conaway, Aaron C., Marshalltown, Ia.
Corlett, William Thomas, Cleveland.
Danielson, Karl A., Litchfield, Minn.
Davis, Geo. W., Kansas City, Mo.
Davis, Robert H., St. Louis.
Dorr, R. C., Batesville, Ark.
Duncan, John H., St. Louis.
Dyer, Isadore, New Orleans.
Engman, Martin F., St. Louis.
Farrer, John T., Providence, R. I.
Field, Geo. J., Salt Lake City.
Fischkin, Edward A., Chicago.
Foerster, O. H., Milwaukee.
Fordyce, John A., New York.
Fox, Howard, New York.
Frick, Wm., Kansas City, Mo.
Gnichtel, A. L., New York.
Greiner, Theodore, St. Louis.
Grindon, Joseph, St. Louis.
Haase, Marcus, Memphis, Tenn.
Harris, Frederick G., Chicago.
Hay, Eugene C., Hot Springs, Ark.
Hays, John Edwin, Louisville, Ky.
Hazen, H. H., Washington, D. C.
Heidingsfeld, M. L., Cincinnati.
Hottinger, Erwin S., Chicago.
Houwink, J. J., St. Louis.
Hughes, N. J., Waverly, Ill.
Inge, James M., Denton, Texas.
Jelks, Frank W., Hot Springs, Ark.
Kessler, J. B., Iowa City, Iowa.
Kimbrough, John S., St. Louis.
King, J. M., Nashville, Tenn.
Knowles, Frank Crozer, Philadelphia.
Lain, E. S., Oklahoma City, Okla.
Lenahan, F. P., Wilkes-Barre, Pa.
Lyle, Halsey M., Kansas City, Mo.
McBride, William L., Kansas City, Mo.
McEwen, Ernest L., Evanston, Ill.
McGlasson, I. L., Waco, Texas.
Miller, W. Jackson, St. Louis, Mo.
Mook, William H., St. Louis.
Ormsby, Oliver S., Chicago.
Prentiss, H. S., Pleasant Hill, Mo.
Pusey, Wm. Allen, Chicago.
Quinn, Wm. A., Chicago.
Raithel, G. H., St. Louis.
Ravogli, A., Cincinnati.
Ravold, Amand, St. Louis.
Roop, William O., Dayton, Ohio.
Roussel, J. N., New Orleans.
Schaleb, Alfred, Owensboro, Ky.
Schaller, R. G., Alton, Ill.
Schmidt, Louis E., Chicago.
Scott, Cline D., St. Louis.
Spelmire, J. B., Dallas, Texas.
Shultz, Cameron, Danville, Pa.
Spink, T. F., Washington, Ind.
Suggatt, O. LeGrand, St. Louis.
Summey, H. C., Omaha, Neb.
Sutton, Richard Lightburn, Kansas City, Mo.
Thompson, M. G., Hot Springs, Ark.
Tucker, E. D., Toledo, Ohio.
Vandehoerk, M. P., Minneapolis.
Varney, H. R., Detroit.
Waugh, J. F., Chicago.
Wende, Grover W., Buffalo.
Wendell, J. T., Louisville, Ky.
Weston, Robert A., Des Moines, Ia.
White, Charles J., Boston.
Wilhelmj, Walter, East St. Louis, Ill.
Williams, A. U., Hot Springs, Ark.
Williams, F. M., Hot Springs, Ark.
Wolf, Alexander S., St. Louis, Mo.
Zeller, Geo. A., Peoria, Ill.

Pharmacology and Therapeutics

Abbott, W. C., Chicago.
Adamson, H. K., Maysville, Ky.
Bailey, Harold C., New York.
Boos, William F., Boston.
Burdick, A. S., Chicago.
Butler, Geo. F., Wilmette, Ill.
Cramp, Arthur J., Chicago.
Dixon, James Thomas, Providence, Ky.
Downing, Ben R., Farmington, Mo.
Edsall, David L., Philadelphia.
Emerson, Haven, New York.
England, Joseph W., Philadelphia.
Friedman, Jacob, St. Louis.
Ford, Starr, Cincinnati.
Gee, H. L., Mount Vernon, Ill.
Habermaas, Albert, St. Louis, Mo.
Hall, E. N., Bowling Green, Ky.
Hallberg, Carl S. N., Chicago.
Haskell, Chas. C., Indianapolis.
Hatcher, Robert A., New York.
Hendrix, M. B., Caruthersville, Mo.
Houghton, E. M., Detroit.
Jenne, J. N., Burlington, Vt.
Kahlo, Geo. D., French Lick, Ind.
Livingston, Alfred T., Jamestown, N. Y.
Loevenhart, A. S., Madison, Wis.
Mason, Frederic S., New York.
McCormack, Arthur T., Bowling Green, Ky.
McCormack, J. N., Bowling Green, Ky.
Megrail, W. P., Wheeling, W. Va.
Motter, Murray Galt, Washington, D. C.
Oakman, C. S., Detroit.
Peters, LeRoy S., Silver City, N. Mex.
Remington, Joseph P., Philadelphia.
Riley, C. M., Alton, Ill.
Seymour, W. H., Charles City, Ia.
Simmons, George H., Chicago.
South, Lillian H., Bowling Green, Ky.
Stewart, F. E., Philadelphia.
Thrush, M. Clayton, Philadelphia.
Wescott, W. C., Atlantic City, N. J.
Wheatley, F. G., N. Abington, Mass.
Whelpley, Henry Milton, St. Louis.

Pathology and Physiology

Albert, Henry, Iowa City Iowa.
Baughman, Greer, Richmond, Va.
Beates, Jr., Henry, Philadelphia.
Black, Stanley P., Pasadena, Cal.
Buhman, Rudolph, St. Louis.
Christian, Henry A., Boston.
Councilman, W. T., Boston.
Darling, Samuel T., Ancon, Canal Zone.
Dewey, Grace, Jacksonville, Ill.
Erlanger Joseph, Madison, Wis.
Evans, Newton, Nashville, Tenn.
Fisch, C., St. Louis.
Frazer, T. R., Commerce, Mo.
Gould, Charles W., St. Louis, Mo.
Gradwohl, R. B. H., St. Louis.
Greene, Marie A., Kansas City, Kans.
Guthrie, C. C., St. Louis.
Hall, Frank J., Kansas City, Mo.
Hall, Winfield S., Chicago.
Harris, D. L., St. Louis.
Henderson, Yandell, New Haven, Conn.
Herald, Arthur A., Shreveport, La.
Herrick, Harold C., St. Louis.
Hirschfelder, Arthur D., Baltimore.
Hodsdon, B. F., Guthrie, Okla.
Hultgen, J. F., Chicago.
Jackson, C. M., Columbia, Mo.
Jennings, M. Dwight, St. Louis.
Jones, R. L., Nashville, Tenn.
Kelly, Patrick H., Chillicothe, Ill.
Kennedy, J. J., Frankford, Mo.
Klenk, Charles L., St. Louis.
Le Count, E. R., Chicago.
Litterer, Wm., Nashville, Tenn.
Lusk, Graham, New York.
MacCallum, W. J., New York.
MacCarty, Wm. Carpenter, Rochester, Minn.
Mallory, Frank B., Boston.
Marchildon, John W., St. Louis.
McConnell, Guthrie, St. Louis.
McVey, Newton, Jefferson City, Mo.
Mullin, R. H., Minneapolis, Minn.
Opie, Eugene L., New York.
Orndoff, Benjamin H., Chicago.
Robertson, H. E., Minneapolis.
Robinovitch, Louise G., New York.
Seymour, Eleanor, Los Angeles.
Simonds, James Parsons, Indianapolis.
Smith, Claude A., Atlanta, Ga.
Southard, E. E., Cambridge, Mass.
Stanley, O. O., Urbana, Ill.
Stewart, Edward L., Kansas City, Mo.
Terrill, James J., Galveston, Texas.
Thompson, Ralph L., St. Louis.
Tiedemann, E. F., St. Louis.
Tyzzer, Ernest E., Wakefield, Mass.
Wallace, George B., New York.
Ward, Henry B., Urbana, Ill.
Warthin, Aldred Scott, Ann Arbor, Mich.
Watson, E. L., Newport, Ark.
Weil, Richard, New York.
Welch, William H., Baltimore, Md.
Wells, H. Gideon, Chicago.
Wiggers, Carl J., Ann Arbor, Mich.
Wilson, Louis B., Rochester, Minn.
Woodyatt, R. T., Chicago.

Miscellaneous

The following failed to indicate preference for any section, or marked more than one on the registration card.

Ball, John H., Crystal Falls, Tex.
Bardeen, Charles R., Madison, Wis.
Bean, J. W., Tacoma, Wash.
Blair, V. P., St. Louis, Mo.
Bolton, John W., Iola, Kan.
Bonnot, Edmond, St. Louis.
Bracy, Rolla, Wellston, Mo.
Braunwarth, Anna M., Chicago.
Brieglet, C. F., St. Clair, Mo.
Burlingame, D. E., Elgin, Ill.
Calhoun, J. G., St. Louis.
Cantrell, G. M., Little Rock, Ark.
Carter, William A., Trenton, Ill.
Causey, G. A., Swifton, Ark.
Clark, E. Spencer, St. Louis.
Cline, Harry X., Marion, Ill.
Clinton, Bertha L., Paris, Ill.
Corr, Lucinda H., Carlinville, Ill.
Craig, Capt. Chas. F., U. S. A. M. Corps, Washington, D. C.
Crouch, E. L., Jacksonville, Ill.
Dawson, J. W., El Dorado Springs, Mo.
Dunavant, H. C., Osceola, Ark.
Early, C. S., Camden, Ark.
Eddy, W. J., Shelbyville, Ill.
Erdhaus, H. B., St. Louis.
Esselbruegge, F. C., St. Louis.
Ewing, Fayette Clay, St. Louis.
Farnsworth, D. B., Springfield, Mo.
Ferguson, M. A., Morris, Ill.
Fishman, C. J., Chicago.
Frank, F. Kourar, St. Louis.
Frauenthal, Henry W., New York.
Goldberg, David D., St. Louis.
Goodman, Thos. B., Colden, Ill.
Grear, D. Watson, Jonesboro, Ill.
Greene, D. W., Dayton, Ohio.
Guthrie, J. R., Dubuque, Iowa.
Haas, Frederic J., Leavenworth, Kans.
Harris, J. E., Marshall, Mo.
Havens, A., New Philadelphia, Ill.
Hill, Charles L., Nashville, Tenn.
Hiller, Frank B., Jefferson City, Mo.
Hope, D. H., Cape Girardeau, Mo.
Huston, Edwin M., Dayton, Ohio.
Ihne, A. J., Fosterburg, Ill.
Jamison, Oscar A., Tuckerman, Ark.
Jefferson, H. A., Clintonville, Wis.
Jenkins, J. M., St. Peters, Mo.
Jungk, C. G. W., St. Louis.
Kane, David M., Sturgis, Mich.
Kuper, George H., St. Louis, Mo.
Leenheer, Cornelius A., Chicago.
LeWald Capt. L. T., Washington, D. C.
Lynch, Albert, Fairbury, Neb.
Mabee, J. J., Capt. Med. Corps, U. S. Army, Jefferson Barracks, Mo.
MacLellan, Chas., Chicago.
McAninch, D. L., Lamartine, Pa.
McCallister, Wm. A., Centralia, Mo.
McCully, James, Dixon, Mo.
McGaughey, Hugh F., Winona, Minn.
McKeenan, R. B. Fort Wayne, Ind.
Magie, Wm. H., Duluth, Minn.
Martin, John H., Chicago.
Mercer, W. B., Raymond, Ill.
Mick, W. H., Omaha, Neb.
Moffitt, W. R., West Lafayette, Ind.
Morgan, William Gerry, Washington, D. C.
Morse, M. R., Harvey, Ill.
Noyer, M. L., Hillsboro, Ill.
Neff, I. H., Foxborough, Mass.
Noltman, H. C., Jacksonville, Ill.
O'Hara, W. J. A., Bridgeport, Conn.
O'Reilley, Robert J., St. Louis.
Orr, H. M., La Salle, Ill.
Parker, A. W., Shenandoah, Iowa.
Pfeiffenberger, I. Mather, Alton, Ill.
Pillsbury, Henry C., U. S. Army, Washington, D. C.
Potts, Jerome D., St. Louis.
Pratt, Fred J., Minneapolis.
Pryor, James C., Washington, D. C.
Renner, F. J., Beloit, Ill.
Riffey, J. H., Girard, Ill.
Robertson, Thomas, Steeleville, Ill.
Salmon, Wm. T., Oklahoma City, Okla.
Sander, Enno, St. Louis.
Sellers, Ira J., Birmingham, Ala.
Seybold, Ira W., Poplar Bluff, Mo.
Shillito, G. M., Pittsburg, Pa.
Shonkwiler, Joseph, Rockville, Ind.
Sisk, James A., Knoxville, Tenn.
Sperry, H. C., Hull, Ill.
Thomas, Chas. Rainey, Roodhouse, Ill.
Thompson, J. R., Bridgeport, Ill.
Tilly, W. T., Muskogee, Okla.
Timmons, James M., West Alexander, Pa.
Tompkins, Christopher, Richmond, Va.
Twitchell, James W., Belleville, Ill.
Ventres, J. M., Portland, Tenn.
Wangelin, Hugo E., Belleville, Ill.
Weber, A. A., Bessie, Okla.
Westerman, C. M., St. Louis.
Whiteis, W. R., Iowa City, Iowa.
Woodfer, A. J., Westvale, W. Va.
Young, I. C., Lowes, Ky.

Simple Syrup in the Treatment of Wounds.—Renssen noticed that the workmen in sugar factories applied syrup in treatment of wounds, and this suggested that the syrupy consisteney might be responsible for the good effects of balsam of Peru in the treatment of wounds. He was confirmed in this impression by the fact that equally good results are obtained with pure and adulterated balsam. A letter from Holland in the *Wiener klin. Rundschau*, April 3, states that Renssen has applied the simple syrup in 60 cases of various injuries, including compound fractures, and found that the lesions healed remarkably promptly and well. One very agreeable feature of the syrup treatment is that it can be washed off so readily.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Montgomery, July 12. Chairman, Dr. W. H. Sanders.

ARIZONA: Phoenix, July 5-6. Sec., Dr. Ancil Martin.

COLORADO: Denver, July 5. Sec., Dr. S. D. Van Meter, 1723 Tremont Street.

CONNECTICUT: Regular, City Hall, New Haven, July 12-13. Sec., Dr. Charles A. Tuttle; Homeopathic, New Haven, July 12. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, New Haven, July 12. Sec., Dr. T. S. Hodge, 19 Main Street, Torrington.

DISTRICT OF COLUMBIA: Washington, July 12-15. Sec., Dr. George C. Ober, 125 B Street, S. E.

INDIANA: Room 120, State House, Indianapolis, July 12-14. Sec., Dr. W. T. Gott.

KENTUCKY: Louisville, July 5-7. Sec., Dr. J. N. McCormack, Bowling Green.

MAINE: Augusta, July 19-20. Sec., Dr. F. W. Searle, Portland.

MASSACHUSETTS: State House, Boston, July 12-14. Sec., Dr. Edwin B. Harvey.

NEW HAMPSHIRE: Concord, July 6-7. Regent, Mr. H. C. Morrison.

NORTH DAKOTA: Grand Forks, July 5-7. Sec., Dr. H. M. Wheeler.

OKLAHOMA: Ione Hotel, Guthrie, July 12. Sec., Dr. Frank P. Davis, Enid.

RHODE ISLAND: State House, Providence, July 7-8. Sec., Dr. Gardner T. Swarts, 315 State House.

SOUTH DAKOTA: Lead, July 13-14. Sec., Dr. F. W. Freyberg, Mitchell.

UTAH: Salt Lake City, July 4-5. Sec., Dr. G. F. Harding, 310 Templeton Building.

VERMONT: Burlington, July 12-14. Sec., Dr. W. Scott Nay, Underhill.

WASHINGTON: Seattle, July 5. Sec., Dr. J. Clinton McFadden, People's Bank Building.

WEST VIRGINIA: Capitol Bldg., Charleston, July 11-13. Sec., Dr. H. A. Barbee, Point Pleasant.

WISCONSIN: Madison, July 12-15. Sec., Dr. John M. Beffel, 3200 Clybourn Street, Milwaukee.

Rhode Island April Report

Dr. Gardner T. Swarts, secretary of the Rhode Island State Board of Health, reports the written examination held at Providence, April 7-8, 1910. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 80. The total number of candidates examined was 9, of whom 4 passed and 5 failed. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Yale Medical School	(1907)	91.7
College of Physicians and Surgeons, Baltimore	(1909)	80.0
Columbia University, Coll. of Phys. and Surg.	(1908)	87.8
Albany Medical College	(1904)	91.8
FAILED		
Georgetown University	(1900)	71.9
Baltimore Medical College	(1909)	75.2
University College of Medicine, Richmond	(1907)	71.1
Laval University, Quebec	(1904) 55.4; (1909)	66.9

Arizona April Report

Dr. Ancil Martin, secretary of the Board of Medical Examiners of Arizona, reports the written examination held at Phoenix, April 4-5, 1910. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 7, of whom 4 passed and 3 failed. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
College of Physicians and Surgeons, Los Angeles	(1909)	84
University of Louisville	(1909)	75
Medico-Chirurgical College, Philadelphia	(1896)	81
Memphis Hospital Medical College	(1901)	79.2
FAILED		
Hospital College of Medicine, Louisville	(1897)	66.5
Omaha Medical College	(1896)	62.8
University of Tennessee	(1901)	56.8

Utah April Report

Dr. G. F. Harding, secretary of the Utah State Board of Medical Examiners, reports the written examination held at Salt Lake City, April 4-5, 1910. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 4, of whom 3 passed and 1 failed. One candidate was licensed through reciprocity. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Rush Medical College	(1907)	91.8
Northwestern University Medical School	(1909)	82.9
Woman's Medical College of Pennsylvania	(1907)	87.9
FAILED		
Keokuk Medical College, Coll. of Phys. and Surg.	(1905)	68.8

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Northwestern University Medical School	(1908)	Illinois

Maine March Report

Dr. Frank W. Searle, secretary of the Maine Board of Registration of Medicine, reports the written examination held at Portland, March 8-9, 1910. The number of subjects examined in was 10; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 8, of whom 7 passed and 1 failed. One candidate was licensed through reciprocity. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Baltimore Medical College	(1905)	83
Boston University	(1893)	75.6
Tufts College Medical School	(1907) 91.4; (1909)	78.6
Harvard University Medical School	(1899)	85
Laval University, Quebec	(1908) 75.5; (1909)	83.2
FAILED		
Laval University, Quebec	(1908)	70.8

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
University of Michigan, College of Medicine	(1909)	Michigan

Massachusetts March Report

Dr. E. B. Harvey, secretary of the Massachusetts Board of Registration in Medicine, reports the written examination held at the State House, Boston, March 8-10, 1910. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 74, of whom 37 passed, including 3 osteopaths and 36 failed, including 3 osteopaths and 10 non-graduates. One candidate did not complete the examination. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Medical School of Maine	(1884) 75; (1907)	79.7
College of Physicians and Surgeons, Baltimore	(1909)	76.6
College of Physicians and Surgeons, Boston	(1908)	80.2
Boston University	(1882) 79.3; (1909)	75
Harvard Medical School (1907) 75; (1908) 78.4, 79.5; (1910) 75.9, 82.2.		
Tufts College Medical School (1905) 75.9; (1907) 78.4: (1908) 75, 75, 78.7; (1909) 75, 75, 75, 75, 78.9, 79.5, 80.2.		
Columbia Univ., Coll. of P. & S.	(1908) 84.2; (1909)	79.1
Dartmouth Medical School	(1909) 77.4, 78,	82.3
University of Pennsylvania	(1906)	83.1
University of Vermont	(1909) ,7,	77.1
McGill University, Quebec	(1905) 83.6; (1909)	84
University of Athens, Greece	(1898)	75
FAILED		
Howard University	(1909)	66.4
Medical College of Georgia	(1901)	55
Maryland Medical College	(1909)	67.8
Baltimore University	(1906)	56.5
Baltimore Medical College	(1904)	59.2
College of Physicians and Surgeons, Baltimore	(1909)	70.3
Harvard Medical School	(1909)	67.8
College of Physicians and Surgeons, Boston (1908) 58, 58.8, 59.2, 60.1, 60.5; (1909) 53.7, 63.9, 65.2, 67.2.		
Tufts College Medical School	(1909)	63.3
Leonard School of Medicine	(1908)	63.5
Eclectic Medical Institute, Cincinnati	(1879)	51.4
University College of Medicine, Richmond	(1907)	64.4
Laval University, Quebec	(1904) 59.7; (1909)	55.
University of Naples, Italy	(1906)	64.4

Connecticut Eclectic March Report

Dr. Thomas S. Hodge, secretary of the Connecticut Eclectic Medical Examining Board, reports that at the meeting held at New Haven, March 8, 1910, one candidate, a graduate of the Eclectic Medical Institute, 1886, was licensed through reciprocity with Colorado.

Connecticut Homeopathic March Report

Dr. Edwin C. M. Hall, secretary of the Homeopathic Medical Examining Board of Connecticut, reports the written examination held in New Haven, March 8-9, 1910. The number of subjects examined in was 7; total number of questions asked,

70; percentage required to pass, 75. The total number of candidates examined was 7, of whom 6 passed and 1 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Hahnemann Medical College and Hospital, Chicago	(1909)	76.5, 79.9
Boston University	(1897)	85.4; (1905) 75.3
New York Homeopathic Medical College and Hosp.	(1903)	78.8
Hahnemann Med. Coll. and Hospital, Philadelphia	(1904)	85.6
FAILED		
Atlantic Medical College	(1909)	69

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

The Opposition to a Department of Health

Last week, in the Correspondence Department, we published a letter sent to the newspapers by Prof. Irving Fisher, in behalf of the Committee of One Hundred on National Health. In that letter a reference was made to Bulletin 41 of the Committee of One Hundred. This bulletin is so good that we reproduce below the major portion of it:

COMMERCIAL INTERESTS OPPOSE NATIONAL DEPARTMENT OF HEALTH

Judge Lindsey, in his famous articles on "The Beast in the Jungle," has shown how human life and child welfare are ruthlessly sacrificed to commercial interests. The same is true on a far broader scale. One cannot touch the problem of public health at any point without encountering the opposition of commercial interests. The old efforts of the merchants of San Francisco to suppress the news of bubonic plague, and of the merchants in southern states to suppress the knowledge of yellow fever, are classical instances. But those who are familiar with health work run into such instances repeatedly. Dr. Wiley pointed out at the congressional hearing in favor of the Owen bill for a department of health that a health officer cannot develop properly unless he is in an environment in which health is the main interest. It is small wonder that the commercial interests do not want an independent department of health. They feel safer with a bureau of health, located in a department devoted to commercial interests. Our principal health bureau is now located in the Department of the Treasury, which is—as it should be—more devoted to financial than to hygienic considerations. Our next important health bureau is that which dispenses the Food and Drugs Act in the Department of Agriculture, which is another commercial department. The plans for transferring the health bureaus to any other of the existing departments, such as the Department of Commerce and Labor or the Department of the Interior, also have the weakness that these departments are dominated by commercial interests.

"THE BEAST IN THE JUNGLE"

Judge Lindsey is not the only one who has seen the "Beast in the Jungle." The advocates of the Owen Bill to establish a national department of health have suddenly encountered in their jungle a wolf in sheep's clothing. As in Judge Lindsey's article, at first the "beast" is not visible, but instead some very respectable, but misguided, people appear on the scene as officers of and sponsors for a so-called "National League for Medical Freedom."

This "League" has organized opposition to the establishment of a national department of health, large advertisements having recently appeared in New York, Washington, and other newspapers, although they have been taken as a joke in and out of Congress. The advertisement tries to create the impression that the movement is one of a "medical trust," attempting to control the practice of medicine. Mr. Charles W. Miller, an Iowa State representative, has been in Washington trying to bring influence to bear on congressmen. Mr. B. O. Flower, a Christian Scientist editor, is president of the League.

They seem to have overlooked the fact that the federal government has no power to regulate the practice of medicine, or to restrict medical freedom, even if this were intended, which it is not.

Previous to the appearance of this wide-spread and expensive advertising, Mr. Miller had been loudly stating that the movement for a department of health had no strength. Why, then, the need of so much effort to combat it? It is estimated that their advertisements are costing somebody $25,000 a day. At this rate, in two or three days they spend more than the American Health League, which has been a potent factor in the movement for the establishment of a national department of health, has spent in the three years of its existence. The same Mr. Miller has criticised the Committee of One Hundred on National Health, which forms the nucleus of the American Health League, for trying to raise a campaign fund, and for suggesting that the government should spend more money on public health. The expenditures of Mr. Miller's "League" not only greatly exceed ours, but include three items which we have never included among our expenditures: viz., for the purchase of newspaper space, for the purchase of articles, and for the purchase of the services of legal representatives to appear at the congressional hearings.

The league for "Medical Freedom" is said to consist of Christian Scientists, osteopathists, homeopathists, eclectics and antivivisectionists. The advertisements state that to join the league no fee is required. Yet they are able to carry on an immensely expensive campaign. Are they willing to state the sources of their income? Simultaneously with the formation of the league, health writers have been approached and offered large sums of money to write against the Owen Bill for establishing a department of health. One writer refused what he believed was an opportunity to make two thousand dollars in this way.

TAX PAYERS' LEAGUE

This attack from the "National League for Medical Freedom" has such a family resemblance to various other attacks, on a smaller scale, which have appeared during the last few years, that we have rummaged through our files for the sake of comparison.

Like Lindsey's "beast," ours seems to have made its first appearance in Denver. The first among our curiosities of "medical" literature was a venomous pamphlet by a notorious quack of Denver, and purporting to represent the "Colorado Medical Liberty League, an organization numbering 1,300 enrol[illegible] members who are tax-paying citizens."

This title bears a striking resemblance to the "National League for Medical Freedom" and its associated tax payers' leagues, which have at the same time, and within a few days of each other, been "organized" in a dozen or more states, while nominally written by a "drugless" doctor, this pamphlet singles out for attack those men and magazines, such as *Collier's* and the *Ladies' Home Journal*, that have fought quackery and the "patent-medicine" evil, and have championed the pure food law.

The following quotations show its animus against pure foods and drugs:

Question: What is the attitude of the Committee of One Hundred in regard to the adulteration of food stuffs and the substitution of drugs as commonly practiced by many commercial concerns?
Answer: It is against all concerns that do not give the finance committee a rake-off.
Question: What is the attitude of the Committee of One Hundred towards injurious "patent-medicines?"
Answer: It is dead set against all patents which do not contribute to the trust's pocket.
Question: Do any members of the Committee of One Hundred receive salaries or other remuneration?
Answer: Nay, nay, that would spoil our game. They will be taken care of later.
Question: How can additional information, including printed matter issued by the Committee of One Hundred, be obtained?
Answer: In car lots or less, F. O. B., New Haven, Conn.
Question: What are the publications and pamphlets now or formerly distributed by the Committee of One Hundred?
Answer: They are too numerous to mention—mostly devoted to "exposing" quacks. A quack is any one who is not orthodox according to the dictum of the medical trust.
Question: Why must an organization of citizens be formed to protect the public health?
Answer: Because that is the only way we can fool the suckers into continuing to take patent medicines only as doctor's prescriptions.

This pamphlet refers to the American Medical Association as a "trust," and composed of "old school fanatics," takes sides with eclectics, osteopathists, spiritual healers, etc., and ends with the following statement: "If the public does not want to be bulldozed by the medical trust, it will at once file its protest against a national bureau of medicine by writing individual letters to congressmen, promising to vote out of office all who vote for such a bureau."

In his speech before the Senate, May 25, Senator Owen said:

I am informed that the sudden and surprising interest of the "taxpayers and voters" of the United States who are organized in this artificial manner and the active interest alleged or manifested of the "homeopaths" and of the "osteopaths" and of the "eclectics" and of the great variety of those who have special views with regard to the various methods of healing the sick has taken place

within seven days, and like a flash of lightning telegrams are coming in from Maine to California. The chairman of the Committee on Public Health and National Quarantine of the Senate, received a very large number of them. Such sudden universality of disapproval of a department of public health on such an unsound theory is astounding; it is more, it is extremely suspicious; it is obviously artificial; it is perfectly apparent that somebody is spending a very large amount of money on this sudden propaganda; it can hardly be doubted that somebody, in gross error, is advising the "homeopaths," the "osteopaths," the "eclectics" that their right to practice medicine is about to be invaded by the federal government.

THE NATURE OF OUR OPPOSITION

Another pamphlet is entitled, "The Political Doctors' Slick Little Joke,—On Congress, on the States, the Pure Food and Drugs Act, and the People." The writer attempted to establish the thesis that the Committee of One Hundred is the tool of the American Medical Association and of the Catholic Church! He quotes scripture to prove this. He distributed a sizeable booklet entitled "Roosevelt Steam-Rolled by the Bible." He shows that the Committee of One Hundred on National Health was prophesied in the Bible and that the "medical arm of papacy is really the pivot on which the old earth of error is to swing into the new heaven and new earth of revelation." In a letter in reference to his book he says, "You may be surprised to know that Taft can be identified in the Bible in more places than the place indicated in my book—the other places are not yet made public. The subleties of the science of medicine and of philosophy are to be confronted by the subleties of the Bible."

The author of these curious aberrations of mind adds in a postscript, "I want to say if you have any intention of getting me committed to the Government Hospital for Insane, you will be foiled."

This insane literature seems of a piece with the literature of the "National League for Medical Freedom." But now these people seem to have found a barrel of money with which they are "moulding" public opinion. It is easy to understand how quacks and nostrum vendors may object to the national pure food law which they are seeking by every means to undo; but it is sad to see reputable and earnest men unwittingly made tools of, and still sadder to see other reputable men sell their services as paid attorneys, and to see writers—unconsciously though it be—prostitute their abilities in the interest of those vampires who feed on illness and prey on the public health.

"LICENSE THEY MEAN, WHEN LIBERTY THEY CRY"

The New York *Times*, which made the mistake on May 17 of printing the advertisement of the "League for Medical Freedom," corrected it on the 18th by the following strong editorial:

"MEDICAL FREEDOM"

Makers of "patent medicines," adulterators of drugs, and practitioners of the cults of mental and osteopathic healing are up in arms. They have persuaded a few well-intentioned but misled individuals to join them, and have formed the "National League for Medical Freedom" to oppose the efforts of practically all the reputable physicians in the country to consolidate the agencies of public health at Washington into one efficient department or bureau. These efforts have been waxing stronger. The men of the American Medical Association and of the Committee of One Hundred on National Health, sanctioned by the Association for the Advancement of Science and headed by Prof. Irving Fisher of Yale, have won the approval of the entire press of the United States in urging the passage of their bill. In the various departments and bureaus of the federal government are lodged powers that cannot be wielded effectively until they shall be coordinated under one head. Once united, they can be used in a great propaganda for educating the people against the habit of self-dosage and a resort to quack medicines for their ailments. By a campaign of prevention the bureau would break the prevalence of epidemics and infections between the states. It would work for the passage of laws that would guard the channels of interstate commerce against the admission of adulterated drugs, and for the establishment of standards of purity and strength that would be copied by the states and cities of the nation.

The self-styled "League for Medical Freedom" quotes Professor Fisher accusingly as having said that the government might soon be appropriating millions yearly for the conduct of this bureau. If it should appropriate a million for every hundred thousand it now appropriates for the protection of the health of hogs and of cattle in the United States, Professor Fisher's prophecy would be fulfilled, and no one would have cause for complaint but these friends of "freedom." Their cry is an old one and well understood.

"License they mean, when liberty they cry."

WHENCE COME THE FUNDS?

The opinion expressed in this editorial is general. It is fair to say that the well-intentioned leaders in this League for "Medical Freedom" doubtless do not realize the situation in which they are placed. They may be correct in their denial that their "League" is being financed by "patent-medicine" interests, but they have not yet disclosed specifically the sources of their funds. Requests so to do have thus far been unanswered. From appearances they have spent more in one day than our committee has spent in a year.

Whatever the source of their funds there can be no doubt that a virtual alliance exists between this league and the purveyors of "patent-medicines" and the opponents of the pure food law.

On the advisory board of the new league is the editor of the organ of the National Association of Retail Druggists, controlled by the members of the "American Druggists' Syndicate" or the "drug trust," which has been so hand-in-glove with the quack medicine interests that many hundreds of its members resigned last fall in protest.

A congressman, on looking up the occupations of the signers of telegrams against the Owen Bill, found a liberal sprinkling of "patent-medicine" proprietors and vendors.

In this unholy and anomalous alliance between "Christian Scientists" and quack medicines are included the services of some newspapers that rely for revenue on quack advertising. (See our bulletin on "A Century's Criminal Alliance Between Quacks and Some Newspapers," by C. S. Andrews).

COINCIDENCES

It may be a coincidence, but simultaneously with the appearance of this "league" in Washington, the same lobbyists who had fought the pure food law also appeared, although not publicly. It may also be a coincidence that at about the same time a certain noted writer on health was offered a large sum of money to write articles to "kill the Owen Bill." Those who approached him for this purpose reluctantly admitted, after first alleging that they represented Christian Scientists, etc., that the "patent-medicine" interests were also behind them.

It may also be a coincidence that one of these afterward acted as an agent to place the advertisement of the "League for Medical Freedom."

It may also be a coincidence that this vigorous effort to prevent the creation of a department of health began immediately after the issue by the Department of Agriculture of a bulletin by Dr. Keber against nostrums, in which—for the first time in history—the names of the "remedies" to be avoided were printed. It would not be strange if the firms that were thus hit hard by the Department of Agriculture should not want to be hit harder, as they might be and ought to be, by a department of health.

It may be a coincidence that at this same time a newspaper now actively opposing a National Department of Health sent a reporter to one of the officers of the Committee of One Hundred to inquire what the committee expected the new department of health to do, and whether, perchance, the committee knew of the nostrum report just made.

It may also be a coincidence that a chemist, interested in food adulteration, came at almost the same time to ask almost the same question.

MISCONSTRUCTION OF FACTS TO MISLEAD READERS

The eagerness of those who construct these advertisements to mislead is illustrated in many ways. For instance, they have utilized a misprint in the report of one of the hearings as follows:

Question: What is the Committee of One Hundred?

Answer: One of its members, Hiram J. Messenger, when asked this question by Senator Crawford of South Dakota (Senate Hearing Owen Bill Page 30) stated, "The Committee of One Hundred is a committee that was appointed by the American Medical Association for the Advancement of Science."

The word "medical" was obviously a slip of the tongue or of the pen. No one ever pretended before that there was any connection between the American Medical Association and the American Association for the Advancement of Science!

MEDICAL CULTS

"The League for Medical Freedom" does not seem to really represent the leading members of the schools of medicine they claim to represent. The foremost members of these various cults have openly favored the Owen Bill. Dr. J. B. Gregg Custis, a homeopath who spoke in favor of the bill, is chairman of the Board of Medical Examiners of the District of Columbia and ex-president of the American Institute of Homeopathy as well as of the International Congress of Homeopathy. Mr. George H. Shibley, a prominent lawyer of Washington, whose wife is an Osteopathist practitioner and who is himself the attorney of this system of healing before committees of Congress, favored the bill and among other things said:

As a citizen and a lawyer, I am deeply interested in the establishment of a national health department. Possibly I can help to dispel some of the fears of those who, in other ways, have come into conflict with the American Medical Association.

There is no possible way whereby any medical sect can secure national health regulations that will interfere with the states'

control of the licensing of the competing schools of healing. It follows that the osteopathic physicians, the homeopathic physicians and the eclectic physicians are in no danger from a national health department.

REAL PURPOSE OF DEPARTMENT OF HEALTH

A department of health has really nothing to do with the medical art. It is really for the purpose of preventing diseases by preventing the pollution of streams, by preventing the adulteration of foods, by preventing the importation of bubonic plague and yellow fever, by investigating health conditions and disseminating information. It has been proved that there are over half a million premature deaths yearly in this country. The Owen Bill, if passed, would ultimately prevent a large proportion of these.

From Owen's Senate Speech: As the author of this bill I wish to say that I believe the more a man knows about the laws of health the less drugs he takes. I have employed homeopaths and osteopaths and allopaths as well to treat myself and the members of my family. I have studied the doctrine of suggestive therapeutics and of Christian Science with great interest and respect, and cordially indorse Horace Fletcher as the best doctor of them all. I stand firmly for medical freedom and for the right of the citizen to select his own medical or spiritual adviser.

THOSE WHO WANT A DEPARTMENT OF HEALTH

The principle of the Owen Bill, establishing a department of health, has been endorsed by the President of the United States, by the surgeon-generals of the Army, of the Navy, and of the Public Health and Marine-Hospital Service, by Dr. H. W. Wiley of the Bureau of Chemistry, by the governors of states, by the Conference of State and Territorial Boards of Health, by the American Medical Association, by the American Public Health Association, by the United Mine Workers of America, by the National Grange, by the Republican and Democratic platforms, and by numerous other organizations.

Life-insurance companies, who advocate this bill, certainly have no desire to limit medical freedom and repress any system which offers the chance of lengthening human life. They have no medical partisanship, and their sole interest is to lengthen life by whatever means possible. Their actuaries state specifically that they believe human life could and would be lengthened by the establishment of a health department.

GENERAL WYMAN FAVORS DEPARTMENT

At the May 19th hearing on the Owen Bill, General Walter Wyman, Surgeon-General of the Public Health and Marine-Hospital Service, came out strongly and firmly in favor of establishing a national department of health. General Wyman has hitherto been non-commital, and the opinion had been entertained generally that he was opposed to the measure.

THE "MEDICAL TRUST"

The American Medical Association has trod on many toes in its efforts to get state legislation enacted. It is natural that enemies thus made should strike back. But in attacking national legislation they are "barking up the wrong tree." Moreover, a great injustice is being done the American Medical Association. It is not a "trust." No one will deny that it includes in its membership the best and ablest men in the profession. It has tended to liberalize rather than to narrow medical ethics and practice. While it has aimed at restrictions, the object has been to prevent the vicious and harmful quack and charlatan from plying his nefarious trade. Naturally it is not infallible, and has doubtless made mistakes, but the present attack on it will be resented by the large public who appreciate the work of the medical profession, as well as by all who believe in fair play.

AMERICAN HEALTH LEAGUE MEMBERS SHOULD HELP

It is important that every member of the American Health League should know that a fight is on. Against us are arrayed the leagues of "freedom," the quack medicine interests, the newspapers allied (by advertising) therewith, and the able attorneys and editors they employ. On our side are President Taft, ex-President Roosevelt, political party platforms, medical, hygienic, scientific, educational, philanthropic, insurance, labor, and grange organizations. While intrinsically we have infinitely the stronger side, our enemies have the great advantage of money. The situation is as serious as in a political campaign in which the forces of evil and money so often triumph. It is another case of the people against the special interests. Each loyal member of our league, and each loyal citizen who reads these lines, should do his part, namely, contribute, if possible, to the expenses of conducting this campaign for establishing a national department of health, and write to congressmen urging their favorable consideration of the Owen Bill

Medicolegal

Requirements and Rights of Applicants for Examination—Power of State Board to Determine What Are Reputable Medical Colleges

The Supreme Court of Missouri says, in the case of State, on the relation of Abbott and others, vs. Adcock and others, constituting the State Board of Health (124 S. W. R. 1100), that a reading of Section 1 of an act approved April 4, 1907, shows that it requires three things of each applicant who desires to be examined touching his qualifications to practice medicine and surgery in Missouri: First, that he shall make application in writing to the secretary of the board 30 days before the meeting thereof; second, that he furnish to the board satisfactory evidence of his scholastic qualifications as therein provided for; and, third, that he shall also furnish to the board satisfactory evidence of having received a diploma from some reputable medical college of four years' requirements at the time of his graduation.

While the act mentioned does not undertake to state what medical colleges are or what are not reputable within the meaning thereof, by clear implication it leaves that question for the determination of the Board of Health. This is made manifest by the act requiring the proof of reputableness to be furnished to the board when the applicant presents himself for examination, and by withholding from the board the authority to issue the license until such satisfactory evidence is furnished. In the court's opinion the language of this act is susceptible of no other construction than that it placed the burden on the relators, when they presented themselves for examination before the board, to prove to its satisfaction by satisfactory evidence the reputableness of Barnes University, and especially the medical department thereof.

If the court correctly understands the position of counsel for the relators, they did not controvert the soundness of the conclusions above stated, but contended that, under the laws of Missouri, "the State Board of Health has no authority to adopt and promulgate fixed rules and regulations as the standard by which the various medical colleges of this state will be adjudged reputable or non-reputable within the meaning of the statute relating to the practice of medicine and surgery. The word 'reputable,' as applied to medical colleges, means reputation, and must be proved in the same way." But, in the court's opinion, counsel misconceived the meaning and object of the rules and regulations adopted by the Board of Health fixing the standards by which various medical colleges would be adjudged reputable within the meaning of the act under consideration. The rule simply provides that all medical colleges, wherever located (and not simply those situate in Missouri), which should, on or before Oct. 1, 1907, conform to the standards specified in the schedule of minimum requirements adopted by the board on July 11, 1907, "should be rated and classified as accredited and reputable, and whose students, after being graduated therefrom, should be admitted to the examination of the State Board of Health for licenses to practice medicine and surgery in the state of Missouri," without being required to furnish other proofs of reputableness, and thereby save each of them the time and expense of furnishing the proofs required of them by said act. In other words, the board, by such rules, undertook to require all medical colleges to adopt such standards as would establish and prove their reputableness in all cases, and thereby remove those burdens from each student who applied for a license, as provided by said act. But said rules of the board do not provide that no graduate from any medical college which has not conformed to those requirements shall not be examined touching his qualifications to practice said professions. This construction seems to have been adopted subsequent to the origin of this controversy. Neither rule nor board is responsible for it.

In the court's opinion, since the act left it to the board to pass on the reputableness of all medical colleges whose graduates applied to it for examination, and to determine the character of the evidence by which said fact was to be established, said rules were not only reasonable and just, but were also wise and proper. All medical colleges and their students

were thereby notified in advance as to what would satisfy the board as to the reputableness of each college. The diploma alone from all colleges which had adopted those standards would entitle the holder thereof to take the examination without further ado. Otherwise many students might innocently be induced to attend colleges which were not, in fact, reputable, and consequently such students would thereby be prevented from establishing their reputableness. In all such cases a great hardship would be visited on all such graduates, but under these rules of the board no injustice could be done to any college or graduate thereof. And, beyond that, the adoption of said standards by the board, and the direct tendency thereof, if the colleges will only conform thereto, would be to uplift and better medical instruction, place her institutions of learning on a higher plane, and reduce the practice of medicine and surgery to a more perfect science, all of which would result in great good to suffering humanity.

But suppose, for argument's sake, that the court is in error in its views regarding the meaning and object of the rules of the board establishing said standards, and that it was the intention of the board to thereby notify, in advance, all persons who might present themselves for examination for licenses to practice medicine and surgery that it would examine no one except those who presented a diploma from some one of the medical colleges which had adopted said standards. That would not excuse the applicant for examination from tendering to the board such evidence as he might have tending to prove that his alma mater was a reputable school within the meaning of the statute. The rule would be illegal and void, and would constitute no legal bar to the applicant's right to stand the examination for his license. Nor could the adoption of such a rule be construed to mean that the board had thereby refused to examine a particular person for a license to practice medicine. The board might change its mind before the date fixed arrived, and before being called on to act. As long as a man or a body of men fill any official position, the law presumes he or they will perform his or their duties whenever any matter is legally presented for action, notwithstanding general declarations previously made to the contrary.

If the relators possess the necessary scholastic attainments and diplomas from some reputable college, and if they can produce before the Board of Health satisfactory evidence of the reputableness of said college, then doubtless the board will, on proper request, give them an examination, as provided for by the act of 1907, and, if found qualified, will presumably issue to them licenses. But if, after such showing, the board should unjustly and arbitrarily refuse to examine them, it would then be time enough to institute mandamus proceedings to compel it to act.

Validity of Note Given for Medical Services to Unlicensed Person

The Appellate Court of Indiana, Division No. 1, says, in Hill vs. Ward (91 N. E. R. 38), a suit on a note made payable to one Doremus and transferred before maturity by indorsement, that a good defense was stated by allegations that the note was given for medical services rendered by a person who was not entitled to receive pay for such services. The Indiana statutes make it a misdemeanor for any person to practice medicine without a license duly issued under the laws prescribed. This being true, the act of Doremus in treating the defendant was an illegal act, and the receipt of the note for such services was a part of such illegal act. It is a well-settled rule of law that business transactions in violation of law, or which involve the commission of a crime or misdemeanor, cannot be made the foundation of a valid contract, and any contract so made is void, and a recovery for services thereunder cannot be had. Cooper, Adm'r, vs. Griffin, 13 Ind. App. 212; Orr vs. Meek, 111 Ind. 40. The cases cited apply the rule to the right to recover for services in the practice of medicine without a license. So the averment showing that the note was given as a part of an illegal contract was a sufficient answer to the complaint, and put the burden on the plaintiff to show his right to recover, notwithstanding the illegality in its execution.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

June 11

1 Natural Selection and our Viscera. R. G. Eccles, Brooklyn.
2 Errors in the Search for the Gonococcus in the Vaginitis of Children. I. Van Gieson, New York.
3 Therapeutic Possibilities of Direct Blood Transfusions. J. A. Hartwell, New York.
4 Benign Obstruction of the Pylorus. J. G. Wells, New York.
5 Cerebrospinal Meningitis of Fulminating Type. S. H. Brown, Philadelphia.
6 A New Gastroscope. M. Einhorn, New York.

Boston Medical and Surgical Journal

June 16

7 *Cardiac Syphilis. G. G. Sears, Boston.
8 *Treatment of Inebriety. I. H. Neff, Foxborough, Mass.
9 *Tuberculous Peritonitis. A. E. Stone, Boston.

7. **Cardiac Syphilis.**—Sears believes that a noteworthy percentage of the patients die suddenly without previous manifestations of ill health, and that numerous others are conscious of little or no cardiac disturbance until a period of overwork or possibly some special effort, which often seems no greater than what they have been accustomed to make without discomfort, leads to an upset of the cardiac balance, with a rapid development or even an immediate onset of urgent symptoms. This may be shown by an attack of which tachycardia accompanied by great anxiety and mental distress is the most striking symptom, or by the usual signs of myocardial insufficiency, dyspnea, precordial discomfort, etc., which may be soon followed by general passive congestion, edema and ascites. Severe headache and vomiting are not uncommon early symptoms. A striking peculiarity of many of these cases has been the lack of response to rest and cardiac stimulants in spite of the fact that one is dealing with the first breakdown. While a certain amount of relief may be obtained, results are often disappointing. Relapses easily occur from what seem inadequate causes.

8. **Treatment of Inebriety.**—Based on the examination of 700 cases of inebriety, Neff claims that inebriety is an expression of nervous weakness or nervous instability; used in its simplest sense it could be called a psychoneurosis, many cases showing symptoms which are found in neurasthenic states and allied conditions. Addiction to alcohol is a symptom of an unstable nervous system, and the contrary view expressed by the laity is not justified by clinical observation or experience. The exciting causes of inebriety, he says, are of physical and psychologic origin. Given a neurotic subject, crises may be precipitated by any marked departure from the ordinary routine (psychologic) or by any disturbance of organic nature (physical). Inebriety is prone to develop as a frank case at the critical epochs of life, namely, pubescence, adolescence and involution. Developing during involution, it is generally the effort of an individual to maintain his productive power by recourse to artificial stimulation. The frequent inception of inebriety at these periods suggests an analogy to the psychoneurosis. Inebriety, being an expression of neuropathy or psychopathy, may be preceded by or accompanied with a multiform nervous syndrome; thus each case is essentially different.

The heredity element in inebriety is considerable and is undoubtedly a powerful predisposing cause. A history of decided intemperance in the parents existed in over 40 per cent. of Neff's patients, while 15 per cent. gave a history of defective ancestry, insanity, neuropathy, drug addiction or tuberculosis being present on the maternal or paternal side. Approximately, 5 per cent. of the patients showed preexistent mental symptoms which could be differentiated. Some of these were distinct cases of psychasthenia, others were of the milder forms of manic-depressive insanity. Neff feels warranted in corroborating the statement made by others that an inherited neurotic or psychic tendency is present in a considerable number of inebriates. Many of these individuals admit peculiarities during pubescence and adolescence, showing clearly neurotic or psychopathic conditions which have antedated the alcoholic manifestation.

9. **Tuberculous Peritonitis.**—Stone asks that we treat tuberculous peritonitis as respectfully as though one had found tuberculous infiltration in the lung top. The patient is infected with tuberculosis; treat him with the best hygienic surroundings that are possible; above all, rest and restraint at first, and then very gradually increasing exercise. If ascites is present, do not be in a great hurry for it to disappear. It may do so spontaneously. Great distention needs relief, of course, either with the aspirator or the aid of the surgeon. When the turn for the better comes, the patients begin to improve in a most remarkable manner. There is no reason why the patient should be withheld from any legitimate operation that may come up in the course of the disease. The disease is tuberculosis and the prognosis is favorable in the simple, uncomplicated cases of serous involvement. When the lung or other distant organ is also involved, the favorable prognosis rapidly diminishes. But in the true cases of tuberculous peritonitis in which no other focus can be demonstrated, the chances of ultimate arrest under properly conducted hygienic treatment are good. They are not enhanced by surgical intervention without distinct purpose, and any such operation must be treated not as itself curative, but as a step or incident of the "cure."

New York Medical Journal

June 18

10 Conditions Pertaining to the Safe-Guarding of Early Life from a Pediatric Point of View. T. M. Rotch, Boston.
11 *Suprapubic Prostatectomy in Two Stages. H. Lilienthal, New York.
12 *Delayed Menopause. A. E. Gallant, New York.
13 The Teaching of Tuberculosis. A. P. Francine, Philadelphia.
14 The Nature of the Cancerous Process. O. Klotz, Pittsburg.
15 Field Operations Against Squirrel Plague in California. W. C. Rucker, Oakland.
16 Clinical Significance of Silent Fluids in the Thoracic Cavity. F. A. Jones, Memphis, Tenn.
17 *Malnutrition in Infancy and its Relation to Gastric Digestion. I. J. Tint and L. Breskman, Philadelphia.
18 Infection with *Balantidium Coli*. I. W. Brewer, Samar, P. I.

11. **Suprapubic Prostatectomy.**—In 16 cases, Lilienthal performed the operation of suprapubic prostatectomy in two stages. The average age of these patients was 71, the youngest was 52 years old, and the oldest 77. All except one left the hospital either entirely healed or with a superficial granulating wound. All were well so far as urination was concerned, and all who were questioned concerning sexual ability reported potency, most of them increased potency. In several cases a bacteriuria persisted for weeks or months after the operation, but it disappeared under long-continued hexamethylenamin medication. In this list of 16 cases the longest interval between the 2 stages was 20 days and the shortest was 2 days, average about 8 days. The average period of hospital treatment from the primary operation to the day of discharge was 38 days in the non-malignant cases.

12. Abstracted in THE JOURNAL, May 28, 1910, p. 1811.

17. **Malnutrition in Infancy.**—The examination by Tint and Breskman of the gastric contents of eleven children, mostly under 1 year of age, without vomiting or green stools, showed a constant presence of free hydrochloric acid, rennin and pepsin. Examination of the gastric contents of twenty children under 1 year of age, with green stools, vomiting, and gradual loss of weight, showed an absence of free hydrochloric acid, rennin, and pepsin. In well developed cases of malnutrition, such an absence of gastric activity was constant and persisted throughout the course of the affection.

The authors believe that the stomach very early in life plays an important rôle in digestion through its peptic and rennin activities. Free hydrochloric acid is normally present. With the onset of green stools in artificially fed and breast-fed children, there is an absence of free hydrochloric acid. The absence of gastric activity is relatively constant in children suffering from malnutrition. The milk should be carefully examined for the fat percentage, when such is taken into consideration in making up feedings, particularly in asylums for children.

Lancet-Clinic, Cincinnati

May 28

19 Sewage Disposal in Cincinnati. A. E. Osmond, Cincinnati.
20 Exercise and Health. I. O. Allen, Richmond, Ind.
21 Osteosarcoma of Fourth Cervical Vertebra Treated by Coley's Serum. F. H. Miketta, Cincinnati.
22 Value of Laboratory Methods to the Medical Student. W. B. Wherry, Cincinnati.

June 4

23 Neurotic Lithemia. R. R. Hopkins, Richmond, Ind.
24 Diagnosis and Management of Uterine Fibromata. S. H. Smith, Cincinnati.
25 Rheumatism in Children. W. H. Hawley, College Corner, Ohio.
26 Importance of Greater Thoroughness in the Teaching of Materia Medica and Pharmacology in Medical Schools. C. L. Graber, Cleveland, Ohio.

June 11

27 Conditions Simulating Gall-Stones. J. C. Sexton, Rushville, Ind.
28 Aids in Didactic Teaching. J. H. Jacobson, Toledo, Ohio.
29 The Etiology of Cataract. L. Strickler, Cincinnati.
30 Sociology and Eyestrain. G. M. Gould, Ithaca, N. Y.

Northwestern Lancet, Minneapolis

June 1

31 Serodiagnosis and Serum Treatment of Tuberculosis. R. Earl, St. Paul.
32 Surgical Tuberculosis. E. M. Lundholm, St. Paul.
33 Goiter: Special Reference to Borderline Cases of Hyperthyroidism. M. M. Ghent, St. Paul.
34 The Conservation of Human Resources: Special Consideration of Milk Investigation. J. L. Coulter, Minneapolis.
35 Symptoms and Treatment of Acute Anterior Poliomyelitis. T. Hatch, Owatonna, Minn.

Medical Fortnightly, St. Louis

May 25

36 Touring the Lands where Medical Science Evolved (continued). R. G. Eccles, Brooklyn.
37 Old Age. W. F. Waugh, Chicago.

Virginia Medical Semi-Monthly, Richmond

May 27

38 Fractures of the Base of the Skull. H. S. MacLean, Richmond.
39 Points in Bacterial Therapy. F. E. Stewart, Philadelphia.
40 Management of Fractures, Especially Compound Fractures. S. Rarden, Portsmouth, Ohio.
41 Prevention in General Practice: A Plea for More Attention to Detail. R. K. Flannagan, Charlottesville.

June

42 Fracture Dislocation of the Shoulder Joint. A. R. Shands, Washington, D. C.
43 Treatment of Fractures After Reduction. C. S. White, Washington, D. C.
44 Early Mobilization in Treatment of Fractures. H. H. Kerr, Washington.
45 *Congenital Absence of the Rectum. W. H. Saunders, Roanoke.
46 Conditions Justifying Induction of Premature Labor. C. H. Kinnear, Tacoma, Wash.
47 Diagnosis of Gastric Ulcer. A. G. Coombe, Vienna.
48 Are We Dying Out? J. G. B. Bulloch, Washington, D. C.

45. **Congenital Absence of Rectum.**—The diagnosis in this case of absence of rectum with sigmoid connecting by a small opening with the urethra at about the juncture of the membranous with the prostatic divisions was made from the following points: A discharge of bowel contents through the urethra; a normal penis, scrotum and perineum; absence of bulging of anus on pressure of the abdomen; first urine cloudy, the last and greater part clear, and the great amount of dissecting necessary to reach the bowel, which was found near the level of the promontory of the sacrum.

American Journal of the Medical Sciences, Philadelphia

June

49 Treatment of Intestinal Indigestion in Children on the Basis of the Examination of the Stools and Caloric Values. J. L. Morse and F. B. Talbot, Boston.
50 Treatment of Hemorrhage from Gastric Ulcer. J. Kaufmann, New York.
51 *Normal Human Blood Serum as a Curative Agent in Hemophilia Neonatorum. J. E. Welch, New York.
52 *Metabolism of Myasthenia Gravis, with Suggestion Regarding Treatment. R. Pemberton, Philadelphia.
53 Treatment of Spasticity and Athetosis by Resection of the Posterior Spinal Roots. W. G. Spiller, Philadelphia.
54 Pathogenesis of the Toxemia of Pregnancy. J. Ewing, New York.
55 Chronic Family Jaundice. W. Tileston, New Haven, Conn., and W. A. Griffin, Sharon, Mass.
56 *Murmurs in Pulmonary Tuberculosis. C. M. Montgomery, Philadelphia.
57 Solitary False Neuroma—Probably Non-Malignant. E. M. Foote, New York.

51. **Hemophilia Neonatorum.**—Under this name, Welch reports a series of cases which includes a number of bleeding babies, in which the etiology of the hemorrhages is unknown. In none of the cases was the hemorrhage due to traumatism. Welch found post mortem that the principal hemorrhage may be either in the brain with extensive laceration, or in the liver, in which case the capsule may be almost entirely dissected from the surface of the organ; hemorrhagic spots in other internal organs and effusions of blood in the various serous

cavities may be found. In some instances he found the spinal canal filled with fluid blood.

CASE 1: The child was 3 or 4 days old when the bleeding began. Within 24 hours the body was black and blue from subcutaneous hemorrhages; there was a large hematoma occupying one-third of the scalp on one side of the head, and bleeding from the mouth and bowel. The case was thought hopeless. It was at this time Welch made the first injection of normal blood serum; 10 c.c. was administered subcutaneously three times during the first day and once each on the following two days. Within a few hours a decided improvement was noted in the condition of the baby, in that the hemorrhages ceased, the old ones began to fade, and strength returned to the child in a very noticeable way. Within three days the hematoma of the scalp was entirely absorbed, and it was evident that the child was out of danger.

CASE 2: On the fifth day blood was found oozing from the vulva. During the sixth and seventh days bleeding was continuous. On the ninth day there was slight oozing from the umbilicus. There was no bleeding after the ninth day. Normal human serum was administered subcutaneously. This baby left the hospital in due time in a normal condition.

CASE 3: The child showed no bleeding until the seventh day. Then a dorsal division of the prepuce was made for phimosis. During the next four days bleeding recurred about every 4 hours, often profuse and difficult to control. There was profuse bleeding from the stump of the cord on the seventh day, which continued on the eighth and ninth days, when the stump was invaginated. On the eighth and ninth days there was bleeding from the lips and gums, and on the tenth day subcutaneous hemorrhages appeared on the face. Normal human blood serum was injected subcutaneously and the child recovered.

CASE 4: On the second day there was slight bleeding from the nose and mouth and small hemorrhagic spots appeared on the arms and back. On the third day the hemorrhagic spots increased in size. On the fourth day profuse bleeding from the mouth and from the bowels occurred. On the fifth day there was more bleeding from the mouth and rectum and more subcutaneous hemorrhages. On the seventh day more subcutaneous hemorrhages in three places on the head. Subcutaneous injections of normal human blood serum were begun. On the fifty-sixth day the baby died, and autopsy showed the cause to be persistent atelectasis of the lungs involving their posterior half. None of the tissues showed signs of hemorrhage.

CASE 5: On the third day blood began oozing from the cord at its junction with the skin, and also from the foreskin, and there was copious bleeding from the nose. The stools were black, showing altered blood. A single injection, etc. of normal human serum was given, and within 6 hours the bleeding ceased and the stools on the following day were normal.

CASE 6: On the second day the child began bleeding from the nose. On the third day it bled from nose and cord, and a large hematoma appeared on the back of the head and neck, extending from ear to ear. On the fourth day there was bleeding from the nose and gums and blood was passed in the stools. On the fifth day there was slight bleeding from the nose; one spot was noticed on the right knee and left elbow. Normal human serum was injected. There was no more bleeding after the fifth day and the child was discharged normal 13 days after.

CASE 7: Bleeding from the cord and rectum began on the fourth day. On the fifth day bleeding from the vagina and rectum, and two subcutaneous hemorrhages appeared on the left side of the thorax. On the ninth day there was vomiting of blood and slight bleeding from the rectum. On the tenth day there was profuse bleeding from the cord, vomiting of blood, and bleeding from the rectum, two subcutaneous hemorrhages on the right side of the thorax, and others on the elbows and on the back. Normal human blood serum was administered subcutaneously. The child recovered.

CASE 8: On the third day the child began bleeding from the mouth and rectum, and under the skin covering the left scapula. On the fifth day bleeding continued; there was no bleeding on the sixth day. On the seventh day there was bleeding from the rectum. Normal human blood serum was injected subcutaneously. The child recovered.

CASE 9: The child had severe hemorrhage from bowel and stomach, but recovered after serum injection.

52. **Myasthenia Gravis.**—Pemberton found that in myasthenia gravis there may be marked loss of calcium by the tissues even under circumstances of marked nitrogen retention. The creatinin output in myasthenia gravis may be reduced to a point below normal; the output of creatinin nitrogen expressed in percentage of the total urinary nitrogen may be almost as low as that seen in conditions of true muscular wasting. These facts taken together form a reasonable basis for the belief that myasthenia gravis is a disease of deranged muscular metabolism, and that one, at least, of these two factors (that is, the loss of calcium) may stand in such a causal relationship as to indicate the therapeutic administration of that element.

56. **Murmurs in Pulmonary Tuberculosis.**—Murmurs over the chest not demonstrably dependent on cardiac or vascular disease, when listened for carefully under favorable circumstances and repeated examinations, are found frequently in tuberculosis. They were heard by Montgomery in nearly three-fourths of the advanced cases. These murmurs are usually systolic in time, and faint in intensity, in Montgomery's cases three-fourths being faint. They are generally soft and whiff-like in character, though they may be rather loud and harsh. In the majority of cases these murmurs are heard repeatedly and usually intermit only temporarily. The areas where they are most commonly heard, and where their maximum intensity most often occurs, are at the base of the heart, chiefly to the left of the median line at the cardiac apex (a little over half as often as at the base), and at the inferior scapular angles posteriorly, more often on the left side. These murmurs are more frequent over the front of the chest than the back; they are more frequent and more widely distributed over the left side in front than the right. They are heard in a relatively small number of cases in the axillæ. They may be very limited in extent or may cover the entire chest. In Montgomery's cases the murmurs were usually heard best during the quietest part of the respiratory act, that is, during expiration or the respiratory pause, and during suspended respiration; less often they were limited to the end of inspiration and beginning of expiration, and rarely they were heard during inspiration only. These murmurs are modified at times, by position, more often by excitement and exertion. With the possible exception of the left side in front, murmurs in advanced cases are heard more frequently over normal or hyperfunctionating tissue than diseased tissue, this being particularly noticeable at the bases posteriorly. The etiology of these murmurs is usually obscure, and causes probably responsible in a certain proportion of all cases are hard to establish in individual cases. In about 7 per cent. of the cases with murmurs, mitral regurgitation dependent on weakness of the heart muscles was diagnosticated. For prognosis and treatment little is gained from these murmurs of undetermined origin. Even when they seem to depend on the advance of the tuberculous process they furnish little information unobtainable in other ways.

Out of 171 cases of pulmonary tuberculosis (over one-half being far advanced cases, and nearly three-fourths of the patients being females), a diagnosis of endocarditis was made in 2 cases (mitral regurgitation once, and mitral regurgitation and stenosis once), and a diagnosis of probable endocarditis (mitral regurgitation) was made in a third case. That is, endocarditis was diagnosticated in 2 or 3 of 171 cases. In none of these cases was a diagnosis of disease of the pericardium or of the aorta made. Myocarditis is not infrequently demonstrated microscopically in hearts from persons dying of tuberculosis, and its occurrence is often suggested clinically. The diagnosis, in individual cases of tuberculosis, however, is usually very difficult, first, because of the frequent absence of important signs, for instance, certain types of arrhythmia; and second, because many of the symptoms of myocarditis may also be produced by tuberculosis. Heart disease with failing compensation, Montgomery has never seen in very far-advanced tuberculosis.

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Journal South Carolina Medical Association, Florence

April

58 *Need of Better Education in the Preparation for the Study of Medicine. J. L. Dawson, Charleston.
59 Present Status of Bacterial Immunization. A. M. Brailsford, Mullins.
60 A Plea for More General Use of Cholecyst-Enterostomy in Certain Cases of Pancreatitis. LeG. Guerry, Columbia, S. C.
61 The Religious Press and Quackery. R. E. Hughes, Laurens.
62 Duty of the Physician to the Public. C. F. Williams, Columbia.

58. Abstracted in THE JOURNAL, May 28, 1910, p. 184.

Journal Arkansas Medical Society, Little Rock

May

63 Dermatitis Exfoliativa. W. R. Bathurst, Little Rock.
64 Medical Association of the Southwest. J. A. Foltz, Fort Smith.
65 Plea for Medical Inspection in the Public Schools. F. D. Boyd, Fort Worth.

American Journal of Physiology, Boston

June

66 *Reactions of the Vasomotor Center to Sciatic Stimulation and to Curare. T. Sollmann and J. D. Pilcher, Cleveland, Ohio.
67 *Acapnia and Shock: Acapnia as a Factor in the Dangers of Anesthesia. Y. Henderson and M. McR. Scarbrough, New Haven, Conn.
68 Adrenalectomy and Glycosuria. H. McGuigan, St. Louis.

66. **The Reactions of the Vasomotor Center.**—Sollmann and Pilcher describe a method for studying the reactions of the vasomotor center by which the complicating factors of the force of the heart's action and the influence of peripheral vasomotor action can be obviated. The method consists in isolating an organ, the spleen usually, from its connection with the central vascular system, but retaining its vasomotor ner-

vous connections and perfusing it with Locke's fluid. They usually curarized the animals and found that curare alone slightly stimulated the vasomotor center after a temporary fall of pressure due to peripheral action. During the brief vasomotor action of curare, there is a considerable peripheral block to weak and moderate vasomotor impulses. This may be completely overcome by strong vasomotor stimulation (if the quantity of curare is not too large). Maximal stimulation of the central stump of the sciatic nerve stimulates the vasomotor center so as to decrease the spleen-flow by 20 per cent., on an average (the blood pressure rising 30 mm. to 25 per cent.). The result is not affected by previous section of the vagi. The absolute rise of the pressure is the same for blood pressures ranging between 70 and 160 mm. The percentile rise therefor varies inversely to the level of the blood pressure. The response of the vasomotor center does not bear any simple relation to the blood pressure. The response of the vasomotor center to sciatic stimulation is only about one-third as powerful as is its response to asphyxia. The absolute change of the blood pressure appears to be a more correct index of degree of vasomotor response than the percentile change.

67. **Acapnia and Shock.**—Henderson and Scarbrough continue their discussion of the acapnia theory of shock and endeavor to show the importance of an undue loss of carbon dioxid in producing fatal apnea in the course of administration of anesthetics.

Anesthetics tend to prevent shock because they diminish the rapid breathing due to pain and thus obviate the development of acapnia (absence of carbon dioxid from the blood).

Respiratory excitement during the initial stages of anesthesia diminishes the carbon dioxid content of the blood and thus tends to induce a subsequent failure of respiration. Similarly ether, unless neutralized by morphin, in dogs often causes hyperpnea, acapnia, and consequently fatal apnea.

Morphin raises the threshold for carbon dioxid more than it does the afferent threshold of the respiratory center. Chloroform elevates the latter threshold more than the former, that is, morphin lessens the sensitiveness of the respiratory center to carbon dioxid more than it does the sensitiveness to external irritation. Chloroform produces an opposite effect. Ether in quantities short of profound anesthesia exerts a respiratory stimulant influence which lowers the threshold for carbon dioxid and thus tends to induce acapnia.

Apnea in anesthesia depends, in the same manner as to normal life, on the relation of the level of the threshold of the respiratory center for carbon dioxid to the quantity of carbon dioxid in the blood and tissues. Whenever the former is above the latter, spontaneous breathing ceases, that is, the less sensitive the respiratory center is and the less carbon dioxid in the blood, the more likelihood of a cessation of the breathing.

Under anesthesia the threshold for carbon dioxid (that is the point at which carbon dioxid will excite breathing) may be elevated 50 per cent. above normal, or depressed 50 per cent. below normal. Such a depression of the threshold causes vigorous hyperpnea. If long continued, it results in intense acapnia, that is, the excessive breathing removes the carbon dioxid from the blood.

Chloroform apnea may be regarded as merely a form of apnea vera.

Experiments show that ether-hyperpnea is as effective as pain hyperpnea as a means of inducing a subsequent fatal apnea vera. For instance, administration of ether in such a manner that rapid breathing is occasioned is as likely to induce shock as intense pain.

In normal subjects under chloroform, respiration always fails before heart. Patients who have passed through a period of sickness and suffering, or their experimental equivalents, are hypersusceptible to the toxic influences of chloroform. In such cases the circulation fails first, or simultaneously with the respiration.

Hypercapnia during anesthesia may be the factor which determines the development of chloroform necrosis.

Skillful anesthesia consists in maintaining the threshold of the respiratory center for carbon dioxid at a nearly normal level and in avoiding the development of either acapnia or hypercapnia.

Long Island Medical Journal, Brooklyn

May

69 Surgery of Blood Transfusion. J. E. Jennings, Brooklyn.
70 Indications for Exploratory Incision in Gastric Diseases. A. Bassler, New York.
71 Chronic Cholecystitis. J. R. Taylor, Brooklyn.
72 Syphilitic Strictures of the Rectum. J. F. Murphy, Brooklyn.

American Journal Obstetrics and Diseases of Women and Children, York, Pa.

June

73 *American Gynecology. E. P. Davis, Philadelphia.
74 *Postoperative Cystitis. J. T. Johnson, Washington, D. C.
75 *Treatment of Eclampsia by Continuous Sugar-Water Instillation. S. D. Jacobson, New York.
76 Metrorrhagia and Uterine Fibrosis. A. Sturmdorf, New York.
77 Mary Putnam Jacobi. J. Walter, New York.
78 *Mechanism of the Third Stage of Labor. P. T. Harper, Albany.
79 *Extrauterine Pregnancy at Full Term. G. D. Nutt, Williamsport, Pa.
80 *Fibroid Tumor Complicating Pregnancy and Rendering a Continuance of Gestation Dangerous and Natural Delivery Impossible. B. F. Baer, Philadelphia.
81 Treatment of Ante-Uterine Pelvic Abscess by Sequestration and Drainage. H. A. Kelly, Baltimore.
82 Vaginal Cysts and Their Histology. G. P. Murray, New York.
83 Rôle of Waldeyer's Lymphatic Chain in the Economy of Health and the Dissemination of Disease. C. G. Crane, Brooklyn.
84 Diphtheria in Children. E. M. Sill, New York.
85 Education of the Atypical Child—The Unusual Child. S. P. Goodhart, New York.
86 Congenital Symbol Amblyopia. J. H. Claiborne, New York.
87 Oral Defects a Great Hindrance in the Proper Development of Children; The State's Duty to Cope with these Conditions. A. Zentler, New York.

73. Abstracted in THE JOURNAL, May 28, 1910, p. 1813.

74. Abstracted in THE JOURNAL, May 14, 1910, p. 1630.

75. **Treatment of Eclampsia.**—The desideratum, according to Jacobsen, was to find a substance which mixed with the water to be administered shall be harmless and will not increase the molecular concentration and specific gravity of the blood, which are already too high. It seemed to him that pure water created irritation of the bowel. The usual physiologic saline solution was rejected as dangerous and illogical. If the patient is dying from a retention of salts in the blood it would be worse than folly to administer more salt in solution. After going over the field carefully, Jacobsen decided that a solution of sugar would meet all indications. Sugar was decided on because of its high molecular weight. The weight of a molecule of sugar is stated to be 342, while that of salt is 58. It is clear that many more of the lighter or smaller salt molecules will go into a given volume of water, than the many times heavier or larger sugar molecule. Therefore, the molecular concentration of the blood would be speedily reduced by diluting it with sugar water, whereas it would remain the same or be increased by administering salt solution.

This seemed rational and was done in several cases, two of which are briefly reported. While under the sugar-water instillation treatment, the specific gravity of the patient's blood was observed by Hammerschlag's method and recorded. It was found that remarkable improvement took place in the condition of the patients under the continuous rectal administration of sugar water by the drop method (Murphy) and that the specific gravity of the blood fell to 1052 from 1060. Both patients made a good recovery. In addition to the sugar-water instillation only water was given by mouth for three days and the usual treatment in these cases carried out, namely, veratrum viride hypodermically, patient wrapped in blankets surrounded by hot-water bottles to induce perspiration, catharsis, later salt-free diet. Jacobsen says that it was astonishing to see the large quantities of sugar water that were absorbed by these patients, and how the quantity of urine and perspiration increased, bringing about improvement in the patients' condition from the start.

78. **Mechanism of Third Stage of Labor.**—Harper says that the placenta is commonly delivered as an inverted cone, the fetal surface presenting; the membranes follow, reversed. This may be called the normal mechanism because it occurs in the majority of cases; it may be explained by the action of the uterine forces on the placenta in its common position in the upper uterine segment, and it is attended by expulsion of the membranes more often intact. Uncommonly, the placenta is delivered as a cylinder, the edge or the edge and maternal surface presenting; the membranes follow, their anatomic relations preserved. This may be termed the abnormal mechanism because it occurs in the minority of cases; it may be explained by the action of the uterine forces on the placenta in its uncommon position in or encroaching on the lower uterine segment; and it is attended by the expulsion of the membranes often incomplete and detached to a greater or less degree.

79. **Extrauterine Pregnancy at Full Term.**—The two cases reported by Nutt were tubal pregnancies at full term with very little departure from normal pregnancy in so far as the mothers' symptoms and feelings were concerned. In each case at the end of the gestation period labor pains were experiences which subsided with the death of the child.

80. Abstracted in THE JOURNAL, June 18, 1910, p. 2090.

Colorado Medicine, Denver

May

88 Lung Surgery. F. W. Bancroft, Denver.
89 Electrotherapeutics. B. B. Grover, Colorado Springs.
90 Iconoclastic Revision of a Classical Case of Diverticulum of the Esophagus. C. D. Spivak, Denver.
91 Multiple Gummata of the Liver. O. M. Shere, Denver.

Medical Herald, St. Joseph

May

92 *Local Anesthesia in General Surgery. L. Freeman, Denver.
93 Expert Medical Evidence at One Dollar a Day. T. W. Schaefer and A. M. Wilson, Kansas City, Mo.
94 Cactin. H. H. Redfield, Chicago.

92. Abstracted in THE JOURNAL, April 2, 1910, p. 1159.

Laryngoscope, St. Louis

May

95 The Comparative Merits of the Methods Employed in the Various Mastoid Operations. J. C. Beck, Chicago.
96 Aural Manifestations of Myxedema. S. M. Smith, Philadelphia.
97 The Cytology of Chronic Middle-Ear Discharges. E. H. White and O. Klotz, Montreal.
98 *A New Vestibular Symptom in Diseases of the Cerebellum. R. Barany, Vienna.
99 In Situ Antrum Trocar. T. A. Dickson, Mobile, Ala.
100 Retropharyngeal Abscess. E. W. Carpenter, Greenville, S. C.

98. Vestibular Symptoms in Diseases of the Cerebellum.—When the Romberg test is applied in cases of left-sided rotary nystagmus of vestibular origin, the patient falls to the right. When the head is turned 90 degrees to the right, the patient falls backward; when turned 90 degrees to the left, he falls forward. This occurs in accordance with the law discovered by Barany that in disturbances of equilibrium of the vestibular apparatus, the direction of the fall is influenced by changing the position of the head.

Washington Medical Annals

May

101 Vasomotor Disturbances of the Upper Respiratory Tract. C. W. Richardson, Washington.
102 Addison's Disease. E. W. Reisinger, Washington, D. C.
103 The X-Ray Method of Diagnosis. A. H. Staples, Washington, D. C.
104 The Written Law in Reference to the Unborn Child. M. Parsons, Washington.
105 Epithelioma of Esophagus. W. Van Swearingen, Washington, D. C.
106 Sarcoma of Liver and Stomach. W. Van Swearingen, Washington, D. C.
107 Pneumonia: An Analysis of Forty Consecutive Cases. H. P. Parker, Washington, D. C.
108 Hypernephroma of the Kidney. I. W. Blackburn, Washington, D. C.

American Medicine, New York

May

109 Diet in Typhoid. G. R. Hall, Brooklyn.
110 Tuberculosis of the Genitourinary Organs. A. E. Isaacs, New York.
111 The Proper Attitude of the General Practitioner Toward the Venereal Diseases. A. L. Wolbarst, New York.
112 *The Musical External Ear. A. O'Malley, Philadelphia.
113 The Treatment of Hay Fever. G. A. Leitner, Piermont, N. Y.
114 *Deciduoma Malignum. A. M. Judd, Brooklyn.

112. The Musical External Ear.—There is, says O'Malley, a peculiar conformation of the external ear in musicians, first observed by J. J. Kinyoun, of Washington, but never reported, which is constant and readily perceptible. The shape of the concha (a shell) is the special phenomenon observable in musicians' ears. In these persons the concha is (1) large; (2) deep; (3) rectangular. The lowest border is horizontal, and at right angles with the helix, which makes the outer border of the concha. In singers, even the noted artists, the lowest border of the concha is not seldom out of the horizontal line as this border goes back from the intertragic notch; thus forming a slightly obtuse angle with the antitragus, but this obtuse angle is not found in the instrumentalists. In some singers the lowest border is horizontal, but the antihelix slopes backward slightly.

Ordinarily in musicians the lowest border of the concha is rounded slightly as it joins the antihelix. It is noteworthy also, that the lowest border of the lobule in musicians is commonly almost parallel to the lowest border of the concha, but this formation is not invariable. The only marked exception to this shape of the lobule O'Malley could find is in Joachim's ear. It is a curious coincidence also that musicians almost without exception have large noses.

When, on the contrary, the ear-lines are vertical, and the concha is narrow, with little or no lower border, and the lobule is large and pendant, the person, no matter how intelligent he may be, lacks the musical sense, is tone-deaf. If a child has vertical ear-lines, it is useless to attempt to teach him music. Again, when a person with vertical ear-lines asks a musician to play an instrument the request is merely an act of patient courtesy, and the final applause is wilful mendacity or a sign of relief.

114. Deciduoma Malignum.—Appended to Judd's article is a splendid bibliography which is sufficiently valuable to demand attention and praise. Judd reviews the clinical history of this affection and reports one case.

Journal of Biological Chemistry, Baltimore

May

115 Determination of Small Quantities of Iodin, with Special Reference to the Iodin Content of the Thyroid Gland. A. Hunter, Ithaca, N. Y.
116 Relative Magnitude of the Parts Played by the Proteins and by the Bicarbonates in the Maintenance of the Neutrality of the Blood. T. B. Roberston, Berkeley, Cal.
117 Refractive Indices of Solutions of Certain Proteins. T. B. Robertson, Berkeley, Cal.
118 Origin of the Brown Pigment in the Integuments of the Larva of *Tenebrio Molitor*. R. A. Gortner, Washington, D. C.
119 Autolysis of Fertilized and Unfertilized Echinoderm Eggs. E. P. Lyon and L. F. Shackell, St. Louis.
120 Influence of Various Dietary Conditions on Physiologic Resistance. N. B. Foster, New York.

Montreal Medical Journal

May

121 The Early Hospitals of Canada. M. L. Meiklejohn.
122 Typhoid Fever Treated in the Montreal Hospital in 1909. A. H. MacCordick and R. E. Powell, Montreal.
123 European Hookworm Disease—Ankylostoma Duodenale. R. E. Powell, Montreal.
124 Climacteric Hemorrhages. J. R. Goodall, Montreal.
125 Things New and Old. A. M. Forbes, Montreal.

June

126 *Experimental Intrathoracic Surgery. E. M. von Eberts and W. H. P. Hill, Montreal.
127 A New Forceps for the Removal of the Anterior Lens Capsule. F. Tooke, Montreal.
128 *A New Operation for the Treatment of Anterior Metatarsalgia Including Morton's Disease. A. M. Forbes, Montreal.
129 Amebic Dysentery with Abscess of the Liver, Originating in Montreal. F. G. Finley and S. B. Wolbach, Montreal.

176. Experimental Intrathoracic Surgery.—The authors carried out successfully two experiments in which, after dissection and retraction of the left vagus, amputation of the whole lung was effected through the primary bronchial division. No reflex disturbances were encountered in these two experiments, and although the animals eventually succumbed some days after operation (10 and 4 days, respectively) from infection of the pleura, the bronchial closures effectually withstood pressures of 20 to 30 mm. of mercury without evidence of leakage.

128. New Operation for Anterior Metatarsalgia.—Forbes' patient was suffering from anterior metatarsalgia. For 10 months he tried all forms of non-operative treatment without getting any relief. Finally Forbes operated, performing a new and original operation. This operation is planned on the supposition that the secondary symptom of this affection, viz., spasm of the extensor, causing hyperextension of the affected toe, acts to depress the head of the metatarsal bone and thus increases the pain and pain-giving deformity. The procedure, then, is to detach this tendon from the hyperextended toe and to transplant it to the head of the metatarsal bone in the expectation of being able to convert what was a power for evil into a power for good. This operation was performed some months ago; the patient is free from both pain on lateral pressure on the anterior arch and tenderness under the head of the affected metatarsal, and he is cured.

West Virginia Medical Journal, Wheeling

May

130 Chronic Rheumatism. T. McCree, Baltimore.
131 Serotherapy. H. W. Daniels, Elkins.
132 Relations of the Dental and Medical Professions. O. Tolles, Parkersburg.
133 Fractures of the Elbow; Diagnosis and Treatment. K. M. Jarrell, Clear Creek.

June

134 Amebic Dysentery: Its Prevalence, Etiology and Treatment. J. A. Nydegger, Pittsburg.
135 Placenta Prævia: Its Pathology and Treatment. W. H. Sharp, Parkersburg.
136 Prognosis in Tabes Dorsalis. T. A. Williams, Washington, D. C.
137 Calculus in Bladder. W. W. Stonestreet, Morgantown.
138 *Aspirin Poisoning. J. E. Cooper, Cameron.

138. Aspirin Poisoning.—Following the administration of 7½ grains of aspirin, every 30 minutes, for 8 doses, Cooper's patient had considerable general cyanosis, extremities cold, heart's action was 70 and very weak, intermitting every third or fourth beat. The skin was rather harsh and dry. The mind was perfectly clear. There was some nausea, with vomiting at intervals. Cooper removed the stomach contents at once by means of stomach tube; the stomach washings consisted of nothing more than some mucus and biliary coloring matter. He applied external heat to the back and extremities, and gave strychnin gr. 1/30 hypodermically. The patient began to rally after 2 hours and made an uneventful recovery.

Journal Kansas Medical Society, Kansas City

May

139 Louis Pasteur. M. T. Sudler, Lawrence.
140 Impetigo. H. W. Manning, Eureka.
141 Peculiar Case of Poisoning by Mercury Bichlorid. E. W. Boardman, Parsons.

Bulletin Lying-in Hospital, New York

December, 1909

142 Sixty Thousand Labors Occurring in the Service of the Society of the Lying-in Hospital of the City of New York. J. W. Markoe, New York.
143 Lacerations of the Cervix During Labor, Based on a Study of 1,000 Cases in Primiparæ. E. S. Gushee, New York.
144 Two Hundred and Fifty Cases of Eclampsia. R. McPherson, New York.
145 Care of the Breasts During the Puerperium. H. E. Lindemann, New York.
146 Morbid Anatomy of the Toxemias of Pregnancy. J. E. Welch, New York.

Proctologist, St. Louis

June

147 *What Relation has Bile to Normal Defecation. L. J. Hirschman, Detroit.
148 The Less Common Rectal Diseases. D. C. Hawley, Burlington, Vt.
149 Perirectal Abscess. C. J. Drueck, Chicago.

147. Relation of Bile to Normal Defecation.—Hirschman claims that while the non-excretion of bile is a very serious matter to the general economy on account of the cholic toxemia which it produces, as far as peristalsis is concerned, one could get along very nicely without any bile at all, as is illustrated in those patients who suffer from permanent fistulas.

New Mexico Medical Journal, East Las Vegas

May

150 Pneumonia. C. W. Fulton, Raton.
151 Indications and Contraindications for Curettage. C. M. Yater, Roswell.
152 Pepsin and its Digestive Powers. P. Worley, Clovis.
153 The Sanitary Needs of Santa Fe. J. A. Rolls, Santa Fe.

Chicago Medical Recorder

May

154 Tuberculous Peritonitis. F. G. Dyas, Chicago.
155 Systemic Blastomycosis. O. F. Scott, Summitt, Ill.
156 Diagnosis and Treatment of the Exudative Diathesis. A. H. Roler, Berlin, Germany.
157 Relation of Anaphylaxis to Immunization. F. P. Gay, Boston.
158 Acute Dilatation of the Stomach. A. M. Miller, Danville, Ill.

Yale Medical Journal, New Haven

May

159 *Gout. N. B. Foster, New York.
160 *New Apparatus for the Administration of Rectal and Pharyngeal Anesthesia. H. K. Thoms, New Haven.
161 Functional Ear Tests. C. Weldner, Hartford, Conn.

159. Gout.—Foster emphasizes particularly that the treatment of gout by means of drugs must take a minor place. No drug is known to have any influence on uric-acid metabolism, much less the power of dissolving the deposits of sodium urates in the joints. The claims made for some drugs, such for example, as piperazin and quinic acid, rest on test-tube experiments that are not borne out when applied to living tissues. The use of alkalies, first advocated by Boerhaave, has not now the repute it formerly held. Von Noorden asserts that alkalies cause a retention of uric acid and precipitate attacks. The salts of lithium are entirely useless. The only drugs which Foster considers to possess any value are the salicylates, which are occasionally given to relieve pain, and the iodids. It cannot be too emphatically stated, however, he says, that no effect can be expected from drugs when they are used without regard to the important consideration—diet.

160. New Apparatus for Anesthesia.—The advantages claimed by Thoms for his apparatus are the following: (1) Uniform heat to the water-bath, which maintains a constant saturation of the vehicle with ether; (2) a pressure regulation by means of which any desired pressure may be obtained in the intestine and evenly maintained; (3) a continuous fresh supply of ether to the intestine, thus insuring a more uniform anesthesia; (4) a means of rapidly replacing the ether-laden vehicle in the intestine with unsaturated vehicle, without disconnecting the apparatus or decreasing the distention; (5) a means of preventing so far as possible, the stoppage of the current by feces; (6) a means of preventing the condensation of any liquid ether in the colon which might cause local irritation; (7) it is equally serviceable for the administration of ether through the intubation of the nasopharynx.

Woman's Medical Journal, Cincinnati

May

162 Value of Early Diagnosis and Treatment of Adenoids. G. P. Yankauer, New York.
163 Idem. W. C. Phillips, New York.
164 Antedexion of the Uterus. M. C. Potter, Rochester, N. Y.
165 Care of the Health During the Menstrual Period. E. D. Barringer, New York.
166 Open-Air Treatment in the Sick Room. J. Walter, New York.
167 Hygiene and Prophylaxis of Mental Defectives. M. S. Macy, New York.
168 Medical Women Needed in India. I. Baksh, Buffalo, N. Y.

Vermont Medical Monthly, Burlington

May

169 Management of Normal Labor. D. J. Evans, Montreal.
170 Inflammation. J. P. Gifford, Randolph.
171 Examination of and Through the Rectum of Children. G. R. Pisek, New York.

Journal of Advanced Therapeutics, New York

May

172 Intensification of Nature's Agents a Specific for Tuberculosis. J. D. Gibson, Denver.
173 Galvanism: Some Uses and Methods. A. T. Livingston, Jamestown, N. Y.
174 Electro-thermic Penetration. F. H. Humphris, London.
175 Ozone in Medicine. S. St. J. Wright, Akron, Ohio.
176 Junod's Blood Derivations. G. Werber, Washington, D. C.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

June 4

1 *Diagnosis in States of Depression. B. Pierce.
2 *The Rightward Edge of Cardiac Dulness. W. Gordon.
3 The State Civil Medical Services. J. Griffiths.
4 The Nationalization of Medical Service. B. Moore.
5 Gastrostaxis. W. H. White.
6 *The Differential Cutaneous Reaction in Tuberculous Diseases. H. Clarke and C. E. P. Forsyth.
7 Sterilization of the Skin of Operation Areas. J. L. Streeton.

1. **Diagnosis in States of Depression.**—In 200 cases discussed by Pierce the relative frequency of occurrence of the various mental disorders was as follows: General paralysis, 8; dementia præcox, 19; psychasthenia, 26; the confusional group, 17; inhibitory, 45; intrinsic, 42; involutional, 27; and unclassified, 18.

2. **Rightward Edge of Cardiac Dulness.**—Emphasis is laid by Gordon on the fact that in so many cardiac conditions an estimate of the state of the right ventricle and auricle is an important factor in our judgment alike of prospects and of progress. It is surely only common sense to believe that these differences are matters not of curiosity, but of great practical importance. In the recumbent position we get, in many cases of cardiac disease, a quite misleading idea of the condition of the right heart which is often then percussionally almost invisible. In the upright position we have usually the great advantage of having much more of the right heart percussionally in view.

6. **Differential Cutaneous Reaction in Tuberculous Disease.**—Acting on the suggestion of Detre that by applying bovine and human tuberculin simultaneously, it would be possible not only to determine the presence or absence of tuberculosis, but

also to determine whether the bacillus present was of the human or bovine variety, Clarke and Forsythe have been using this method for about 18 months, and now record the results in 250 consecutive cases. The technic is simple. A 25 per cent. solution of old tuberculin is made up with a diluent consisting of 1 part of 1 in 20 phenol-glycerin and 2 parts of normal saline solution. The solutions are kept in 3 pipette stoppered bottles containing, respectively, the diluent for control, bovine and human tuberculin.

On the right forearm is placed a drop of the diluent, and at some distance a drop of human tuberculin, and the skin is scarified through each drop with a straight Hagedorn needle. The left arm is similarly treated with bovine tuberculin. A different needle, which is kept in alcohol, is used for each solution.

If a reaction occur, a small red papule appears in 24 hours, increases in size for three or four days, and then gradually fades in about a week, leaving in some cases a slight desquamation or pigmentation. In a few cases the papule becomes vesicular, and in still fewer the reaction is delayed until the fifth or sixth day. The control should show no reaction on the third day. In every one of the first 250, there was some reason to suspect the presence of tuberculosis. Seventy-nine cases were certainly tuberculous, in 42 the diagnosis of tuberculosis was highly probable, and in 129 there was no evidence of tuberculosis other than the reaction when present.

All cases certainly tuberculous gave one or both reactions, with one exception, namely, a case of tuberculous meningitis in which tubercle bacilli were found in the cerebrospinal fluid. This patient died. Of cases probably tuberculous, one or both reactions were present more frequently where the probability was greater than where the probability was less. In cases suspected of tuberculosis, where there were no definite diagnostic signs, one or both reactions were present, more frequently after the age of 15 years and most frequently in patients over 45 years of age. It is obvious, however, that the probability of any individual being tuberculous increases with his age. In the pulmonary cases, of those certainly tuberculous, 2 gave a bovine reaction, and 22 gave both reactions. Of those almost certainly tuberculous, 2 gave a human reaction, 1 a bovine, and 39 gave both reactions. In these two groups of 66 patients examined, 61 gave both reactions, which in 28 cases were equal, in 17, the human, in 16 the bovine being the greater; 2 gave the human reaction only, and 3 the bovine. In all cases some reaction occurred.

Lancet, London

June 4

8 Aneurismal Varix in the Leg of a Child, aged 7 Years. H. Morris.
9 Relation of Fibrosis to Tuberculosis. C. T. Williams.
10 *Pathology of Rheumatic Fever. F. J. Poynton and A. Paine.
11 Nephrectomy. R. A. Stoney.
12 Volvulus Associated with the Reduction of a Hernia. G. Taylor.
13 Pulmonary Tuberculosis in Children. M. H. Williams.
14 Encapsulated Cerebral Abscess. J. A. C. Macewen.
15 Fatty Degeneration of Arterial Hypertension. L. T. Thorne.

10. **Rheumatic Fever.**—Poynton and Paine hold that no explanation of acute rheumatism can compare with that which attributes it to an infection with a diplococcus of the streptococcal group.

Medical Press and Circular, London

May 11

16 Suppurative Diseases of the Maxillary Antrum. C. Nourse.
17 Our Responsibilities in the Prevention of Inherited Syphilis. S. Scheidl.
18 Treatment in the Severer Forms of Diabetes Mellitus. W. B. Warrington.
19 Respiratory Exchanges and the Maximum Expiration in the Phthisical. A. Robin.

Clinical Journal, London

May 11

20 Chronic Ascites with Cirrhosis of the Liver. W. P. Herringham.
21 Sympathetic Ophthalmia. A. Ormond.

Practitioner, London

May

22 Prevention of Constipation in Women and Children. J. Byers.
23 Constipation in Women. G. E. Herman.
24 *Constipation in Childhood. F. J. Poynton.
25 *Constipation in Infants. E. Pritchard.
26 Constipation in Adults. W. H. White.
27 *Habitual Constipation Mainly from the Standpoint of its Effects. W. Russell.
28 Secondary Constipation. A. P. Beddard.
29 Diet and Constipation. E. I. Spriggs.
30 Drugs in Constipation. W. C. Wilkinson.
31 *Agar-agar Treatment of Chronic Constipation. L. M. Gompertz.
32 *Use of Sour Milk in the Treatment of Constipation. T. D. Luke.
33 The Spa Treatment of Chronic Constipation. L. Williams.
34 The Cutaneous Manifestations of Constipation. A. J. Whiting.
35 The Operative Treatment of Chronic Constipation. W. A. Lane.
36 Appendicostomy in the Treatment of Chronic Constipation. P. L. Mummery.
37 The Investigation of Constipation by the X-Rays. A. F. Herz.
38 Mechano-therapeutics for Constipation. T. S. Dowse.

24. **Constipation in Childhood.**—To combat constipation in infancy, Poynton says it may be quite sufficient to use manna, which should be dissolved in hot water and strained through muslin. This remedy, no doubt, often fails, but it is very satisfactory when effectual, and for this reason worthy of trial. Some light massage along the colon will help these cases. Salines are most valuable remedies. The secret of the successful use of salines lies in their regular employment, in sufficient dosage to produce a thorough relief of the bowels. The initial dose must be an experiment, but, once ascertained, it should be persisted with until a regular habit had been established and then should be diminished cautiously. If too little is given, griping pains and distention may result, and if too much, the motions will become unduly frequent and liquid.

A likely prescription for a child 2 years of age would be:

R	gm. or cc.	
Magnesii carbonatis	66	gr. x
Sp. chloroformi	13	mii
Syrupi	1	mxv
Aquæ	8	5ij

To be taken twice a day—after meals.

It would be necessary, if there has been constipation of some standing, to give a dose of calomel or grey powder before commencing the saline treatment. Castor oil is well known as a very safe aperient, but has the disadvantage of intensifying the constipation if used in occasional doses. In spite of this it is invaluable when it is necessary to clear away curds in milk dyspepsia, and it can then be followed by mild salines. If a small and delicate infant has to be treated, the castor oil can be given with an equal part of pure olive oil. Castor oil has another useful function in young children, when there is irregularity of action of the bowels. In this particular class of case there is at one time constipation, at another diarrhea. Small doses of this drug given once, twice or thrice a day will often correct either of these irregularities. Five minims given in a mixture with a carminative twice a day is an average dose for a child of 12 months.

When the constipation is associated with deficient hepatic action, indicated by pallor of the stools, grey powder is a useful remedy, and this may be combined with powdered rhubarb as follows:

	gm. or cc.	
Pulv. hydrargyri cum creta.	06	gr. i.
Pulv. cinnamoni	33	gr. ss.
Pulv. rhei	2	gr. iii.

Fiat pulv.

To be given at night.

Poynton has used phenolphthalein in a considerable number of cases of constipation in mentally deficient infants and children, and he has found it sometimes very convenient and efficacious in these cases in doses from ¾ of a grain to 2 grains.

25. **Constipation in Infants.**—The more important of the many causes of constipation are classified by Pritchard as follows:

A. ORGANIC IMPEDIMENTS TO PERISTALSIS:

(1) Congenital malformations:
  (a) Atresia recti,
  (b) Imperforate anus,
  (c) Dilated colon (Hirschsprung's disease).
(2) Acquired structural alterations:
  (a) Dilated, convoluted, or lengthened colon from overfeeding, or flatulent distention;

(b) Inflammatory conditions of (i) peritoneum (peritonitis); (ii) bowel wall (results of long standing colitis or dysenteric diarrhea); (iii) mucous membrane (inspissated mucus in chronic colitis).

B. INTERFERENCE WITH NERVOUS MECHANISM OF PERISTALSIS AND DEFECATION:

(1) Organic (meningitis, hydrocephalus, tumors of brain and spinal cord);
(2) Toxic conditions:
(a) specific infections (fevers, etc.);
(b) specific poisoning due to drugs (opium, lead, excess of lime water, etc.);
(c) intestinal toxemias due to decomposition of food in the bowel.
(3) Exhaustion of nerve-centers due to over-stimulation by:
(a) diarrheas;
(b) purgative drugs.
(4) Interference with the peripheral nervous mechanism by:
(a) Hypersensitiveness of anal sphincter (fissure of anus).
(b) Anesthesia of sensitive zone of rectum (by enemata suppositories, presence of foreign bodies, etc.).

C. FAULTS IN THE INTESTINAL CONTENTS:

(1) Insufficient food (starvation, vomiting),
(2) Deficiency of fluid (dehydration of tissues by fevers, loss of blood, want of bile and intestinal secretions).

The treatment of constipation in infants is summarized by Pritchard as follows:

(1) In all cases the exciting cause, such as deficiency or excess of food, or qualitative faults, must be treated by appropriate means; (2) the motions may be softened by—(a) free doses of petroleum emulsion, and (b) in aggravated cases by small doses of drugs which promote intestinal secretion and the outflow of bile; (3) inertia of the bowel may be treated by—(a) massage, or massage combined with electricity, and (b) in aggravated cases by cascara sagrada and nux vomica; (4) in cases in which a chronic colitis complicates the condition, a preliminary course of irrigation (Plombières method) may be employed; (5) in cases in which the motions are light colored and offensive, liquor pancreaticus may be added to the petroleum; (6) in all cases regularity of habit must be enforced by careful and systematic training.

27. **Habitual Constipation.**—It can often be found out from a patient, says Russell, that certain exercises, some simple dietetic measure, or the drinking of water the last thing at night or first thing in the morning, are sufficient to cause bowel action; whenever this is the case these measures ought to be persevered with. Bowel action is favored in many persons by regularity of practical suggestion. The smell of castor oil is said to be sufficient for some. Minute doses of common aperients are ample for others, so minute in fact, that some people insist that the action is by suggestion. Whatever it be, the remedy that acts so is the ideal one for the individual. If a laxative drug has to be taken regularly, perhaps daily, the drug which in smallest quantity ensures movement is the ideal one for the individual, and can often only be found by experience.

31. **Agar-agar Treatment of Constipation.**—The constant or daily use of agar-agar, according to Gompertz, brings about normal evacuations. It is a helpful and harmless remedy that may be used indefinitely without the diminishing and aggravating effects of drug-treatment. The fact that it produces a condition which approximates natural functions, affording necessary relief without interfering with other medical treatment, should entitle agar-agar to professional consideration, and overthrow any objection against its use.

32. **Sour Milk in Constipation.**—Luke outlines his practice as follows: Patients usually take their first glass at breakfast in the place of porridge. It is convenient to turn the glass out into a cold pudding plate and sprinkle the curd with sugar, or with a mixture of cinnamon—powdered—with sugar. Some patients enjoy the slightly acid, sharp taste, and find it more agreeable and appetizing without any added sugar. A brown meal biscuit goes well with it. At lunch the patient takes the curd instead of soup, and at dinner to replace any sweet pudding or pastry by the curd. This makes a convenient distribution and prevents the patient feeling that the extra bulk of food is embarrassing.

Some patients, who are on a purin-free diet and do not take afternoon tea, find a glass of curd nice at 4 p. m., especially in hot summer weather. Luke has never found patients to suffer any material inconvenience or digestive discomfort which was traceable to this diet. If any flatulence or discomfort is experienced for a day or two, the amount of milk taken should be reduced and gradually increased once more as the patient gets accustomed to it. The time for which the milk is taken should be never less than six weeks, if it agrees at all, and it may be quite well continued for six months, and afterward taken occasionally as an article of daily diet.

Journal of Laryngology, Rhinology and Otology, London

May

39 Pathologic Anatomy of Deaf-Mutism. A. A. Gray.
40 Acquired Deaf-Mutism due to Congenital Syphilis. M. Yearsley.
41 Tuberculous Disease of the Trachea Leading to Cartilage Necrosis and Involving the Thyroid Gland. T. Guthrie.
42 Paresis of the Third Nerve and Diseases of the Sphenoidal Sinus. C. Zeim.

Journal of Obstetrics and Gynecology of the British Empire, London

May

43 *After-results of Abdominal Operations on the Pelvic Organs in 1,000 Consecutive Operations. A. F. Giles.
44 *Menstruation in Europeans, Eurasians and East Indians in India. J. C. H. Leicester.

43. **After-results of Abdominal Operations.**—As the result of his study, Giles claims that the general health after myomectomy is very good, 85 per cent. of patients being in quite good health, or at least better than before the operation. The likelihood of recurrence of fibroids is relatively small, the cases of recurrence amounting to under 10 per cent.; 90 per cent. were free from recurrence after periods varying from 1 to 7 years. The menstrual loss is moderate or scanty in about 85 per cent. of cases, many of the patients stating that the loss was less than before the operation. The uterus from which fibroids have been removed may be serviceable for child-bearing, 3 out of 15 married women under 45 having become pregnant subsequent to the operation; the uterus bears the strain of pregnancy and labor without difficulty.

44. **Menstruation in Europeans, Eurasians and East Indians.**—Leicester found on investigation that menstruation begins at a later period among the Europeans than among those of mixed extraction; and that, furthermore, the more the dark element predominates the earlier is the age of onset. Among the East Indians, 53.73 per cent. begin to menstruate before the age of 14 years; of Eurasians, 48.22 per cent.; and of Europeans 39.37 per cent.; while in this latter class of those who had been borne and bred in India, 39.81 per cent. commenced to menstruate before the age of 14, and 38.98 per cent. of those who had not been borne in India. This would seem to show that the onset is slightly earlier among those Europeans who are born and bred in this country than among those who come out here at a later age; but the difference is so slight that in the absence of further figures no stress can be laid on this point.

The average age of commencement works out at 14.32 years in Europeans, 14.15 years in Eurasians, and 13.86 years in East Indians. From these figures it would appear that the age of commencement of menstruation among Europeans in the Tropics is perhaps slightly earlier than it is in temperate climates, this point being somewhat more marked among those who have been born and bred in India; the difference is, however, so slight that it certainly seems as if the effect of climate had been unduly exaggerated by certain writers, the question of race apparently being of far more importance in this matter.

The average periodicity of the flow appears to be more regular in Europeans than in those races of mixed extraction. The average duration of the period is probably practically the same in all these races with the possible exception that it is of slightly shorter duration in Europeans coming to India than in

those of other classes. The commonest type of menstrual pain among all classes seems to be that occurring during the period only, and the least common that occurring only before the onset of the flow. The effect of the Indian climate on the periods of Europeans coming out to the country for the first time after the establishment of menstruation is nil in nearly two-thirds of the cases, and in less than one-third is there any increase in the amount lost. The effect of climate, both as to the onset of menstruation and also as to the amount lost at the periods, has probably been overestimated. Race would seem to have far greater influence on onset than climate.

Annales des Maladies des Org. Génito-Urinaires, Paris

April 18, XXVIII, No. 8, pp. 673-768

45 Multiple Calculi in the Pelvic Ureter in a Little Girl. Eynard and Rafin.
46 Improved Apparatus for Urethroscopy and Electrolysis. Abadie.
47 Graphic Registration of the Renal Secretion and Its Ejaculation from the Ureter Mouths. (Urorythmographie.) R. Dos Santos.
48 Technic for Electrolysis of the Urethra. P. C. Petit.
49 Systematic Study of Pain, Hematuria, Micturition and Character of Urine Jet. (La méthode dans l'urologie.) S. Galatzi.
50 Improved Technic for Drainage of the Bladder. (Modification aux procédés actuels de drainage de la vessie.) J. and P. Fiolle.

Annales de Médecine et de Chirurgie Infantiles, Paris

March 1, XIV, No. 5, pp. 145-180

51 *Epidural Injections in Treatment of Enuresis or Essential Incontinence of Urine. G. Sisto.
52 Two New Cases of Bacterial Meningitis Without Cellular Reaction. E. Lesné and L. G. Simon.

April 1, No. 7, pp. 217-252

53 Arthropathies of Tuberculous Origin Accompanying Valvular Cardiac Lesions. H. Barbier.
54 The Radioscopic Triangle in the Axilla in Pneumonia in Children. E. Weill and G. Mouriquand.
55 Three Cases of Laryngostomy for Cricotracheal Cicatricial Stenosis. G. Guisez.

May 1, No. 9, pp. 289-320

56 *Differentiation of Tuberculous Peritonitis Without Ascites. P. F. Armand-Delille.
57 Children's Plays. (Les jeux des enfants. De leur influence en hygiène.) Delobel.

51. Epidural Injections in Treatment of Incontinence of Urine.—Sisto says that the epidural space is a favorable route for absorption of a drug on account of the abundance of veins in the region, permitting much more rapid and extensive absorption than by the subcutaneous or gastric route. It is the ideal method, he declares, for anesthetizing the spinal roots while it is free from the dangers of the lumbar injection into the subarachnoid space and from the inconveniences and perils of intravenous injections. He reports a case in which injection of less than 5 c.c. of physiologic salt solution at blood temperature cured completely life-long nocturnal incontinence in a girl of 14, otherwise healthy. There has been no recurrence during the more than two years since. He followed Cathelin's directions in every point, and commends the epidural injection, after failure of all other measures, citing Zubizarreta's favorable experience with 12 cases. The latter noticed a neuropathic tendency in all his patients and states that the epidural injection in one case was made in the ward where there were four others. The child screamed while the injection was being made, and none of the children was incontinent thereafter for several nights. Bordot has recently reported that he cured 5 out of 11 children with incontinence by the epidural injections, and Sisto has not found the method invariably effectual.

56. Tuberculous Peritonitis without Ascites.—In the case reported a 2-year-old boy developed symptoms suggesting recurring acute appendicitis, except that McBurney's point was not tender, and the child was kept on a light vegetable diet for a few months. An attack of pain in the kidney region at one time was assumed at first to be due to nephritis, but the urine persisted comparatively normal. The recurring abdominal pain at last compelled a laparotomy, when the appendix was found sound but the peritoneum proved to be studded with tubercles without any tendency to ascites. The child was sent at once to a sea-shore sanatorium and now, a few months later, seems to have entirely recovered. Delille comments on the case that months were wasted with the light vegetable diet when the child should have been given general treatment for the tuberculosis; the tuberculin skin reaction would probably have cleared up the diagnosis, but no one thought of this as there was absolutely nothing in the family or environment to suggest possible tuberculosis.

Archives Générales de Chirurgie, Paris

April, IV, No. 4, pp. 321-440

58 *Tuberculosis of the Adnexa. (Tuberculose des annexes de l'utérus.) A. Rives.
59 Multiple Fracture of the Arm. (Fractures simultanées du radius et du massif épicondylien de l'humérus avec luxation du coude en arrière.) Vandenbossche.

58. Tuberculosis of the Adnexa.—Rives has compiled 250 cases of a tuberculous process in the adnexa, published in the last decade. Although the years between 15 and 25 are most affected yet the list of cases includes all ages from infancy to old age. A predisposition is evidently afforded by congenital deformities, stunted development and neoplasms, especially ovarian cysts, and gonorrheal lesions, fully one-tenth of the cases occurring in virgins. Treatment should be the general measures for tuberculosis, and severe lesions may retrogress under this alone. Surgical measures are indicated only in case of vital indications and a primary focus or to remove absolutely useless organs. In a number of cases on record the lesions subsided and menstruation and conception followed. Operative treatment does not seem to give permanent cures; a survival of more than a year is recorded in only 38 out of 275 cases in which it was attempted. The number of survivals after minor, conservative operations is as large as after more radical measures. The rarity of a primary localization also tends to discredit the latter. The summaries of 12 cases from the Montpellier hospitals are appended. Three patients are in good health to date, from 4 to 7 years after abdominal or vaginal panhysterectomy; in the other cases the operation is comparatively recent. Differentiation is generally difficult.

Archives des Maladies de l'App. Digestif, Paris

April, IV, No. 4, pp. 177-240

60 *Foreign Bodies in the Esophagus. (Corps étrangers de l'oesophage.) G. Guisez.
61 *Digestive Disturbances and Intercostal Neuralgia. M. Loeper.
62 *Normal Toxicity of the Food. G. Linossier and G. H. Lemoine.

60. Foreign Bodies in the Esophagus.—Guisez tabulates the details of 49 cases from his experience and discusses them from the standpoints of esophagoscopy, clinical observation and treatment. The mucosa tolerates bodies with round edges, such as a coin; only slight superficial lesions of the mucosa were evident in any such cases even when the foreign bodies had been impacted for several days up to four years. The foreign body was a chunk of meat in one case and in some others bismuth, taken for Roentgen ray examination, had packed into a lump from spasm of the cardia or cancerous obstruction.

61. Digestive Disturbances and Intercostal Neuralgia.—Loeper has encountered a number of cases in which gastric dyspepsia, pain and oppression in the stomach and retarded evacuation followed typical intercostal neuralgia with or without zona and zones of hyperesthesia, the digestive disturbances developing only after the neuralgia, of which they were thus evidently a complication, a visceral manifestation of a superficial neuralgia, which, as the patients said, "settled in the stomach." In some similar cases on record the visceral manifestations were more in the intestines. Diarrhea followed zona in Rouyer's case. The data to date seem to indicate, Loeper thinks, that the primary trouble is in the spinal roots, and the relief from lumbar puncture in some cases seems to sustain this view. Otherwise treatment is only that for neuralgia in general; with a suspicion of syphilis, specific treatment may give brilliant results as in one of the cases reported.

62. Normal Toxicity of the Food.—Subcutaneous injection into animals of various albuminoid substances of animal origin showed that all had a decided and constant toxic action, unless they had been previously treated with gastric juice; this seemed to annul their toxicity completely. Heating the substances beforehand also annulled their toxicity for the kidneys. It is evident, Linossier and Lemoine remark, that the least irregularity in the natural defences in the gastrointes-

tinal tract leaves the toxicity unannulled. They add that life is an uninterrupted struggle, inevitably terminating in defeat, and it is curious to learn that included among the enemies which the organism has to contend with are meat and milk, supposed to be its most potent allies. Digestion is the battle, and the conquerors make slaves of the conquered. But years of this struggle finally wear out the organism even if it has been constantly victorious.

Archives de Médecine des Enfants, Paris

May, XIII, No. 5, pp. 321-400

63 Changes in the Liver of Children with Surgical Tuberculosis. (Les altérations fonctionelles et anatomiques du foie des enfants dans la tuberculose chirurgicale.) V. Brun and G. Bongioannini.

64 Analysis of 3,750 Cases of Surgical Tuberculosis. (Statistique des enfants traités dans le service du Dr. Broca pour tuberculose chirurgicale.) C. Claeys.

Bulletin de l'Académie de Médecine, Paris

May 10, LXXIV, No. 18, pp. 385-404

65 *Primary Tumor of the Liver. (L'hépatome.) Rénon and Others.

66 *Differential Importance of Serodiagnosis of Actinomycosis. F. Widal.

May 17, No. 19, pp. 405-424

67 Localized Black Sweat; Melanephidrosis. (Nouveaux faits concernant la chromidrose.) R. Blanchard.

65. **Primary Tumor of the Liver.**—Rénon and his coworkers explain primary hepatoma as an aberrant embryonal tumor resulting from the revivification of the normal embryonal process later in life.

66. **Serodiagnosis of Actinomycosis.**—Widal was able to differentiate actinomycosis by the seroreaction in 8 cases, the only negative reaction being in a case in which the cure had been complete for over four years. The specific reaction is both by agglutination and by fixation of complement by means of the spores of the sporotrichum. Actinomyces cultures can not be used for the tests, but the generic reaction with sporothrix spores is constant and lively. It is specific for actinomycosis, sporotrichosis and thrush, but these can be readily distinguished. Sporotrichum cultures can be preserved indefinitely, he says, by sterilizing with formalin.

Lyon Médical, Lyons

April 17, XLII, No. 16, pp. 853-904

68 Radiotherapy of Suppurating Adenitis, Ulcerations and Fistulas of Glandular Origin. F. Barjou.

April 24, No. 17, pp. 905-948

69 Treatment of Congenital Inguinal Hernia in Adults by Simple Resection of the Ligated Sac. Véron.

Obstétrique, Paris

May, III, New Series, No. 5, pp. 385-560

70 Importance of Blood Picture and Bacteriologic Examination of the Blood in Puerperal Infection. (Valeur de l'ensemencement du sang et de la méthode d'Arneth-Wolff dans le pronostic de l'infection puerpérale.) V. Cathala and P. Guéniot.

71 Experimental Research on the Kidney of Gravid and Suckling Bitches. (Evolution de la graisse dans le rein de la chienne gravide et nourrice.) J. L. Chirie.

72 *The Glycolytic Power during Uncontrollable Vomiting of Pregnancy. (Recherches sur le pouvoir glycolytique chez la femme enceinte atteinte de vomissements incoercibles.) P. Lequeux.

73 Experimental Research on Tranfusion of Blood During Pregnancy. P. Delmas.

74 Enlargement of the Transverse Diameter of the Pelvic Outlet by the Lithotomy Position plus Extension of the Legs. (L'agrandissement du diamètre bis-ischiatique par la position de la taille complétée par l'extension des jambes.) L. Devraigne and P. Descomps.

75 *Tabes and the Puerperium. (Tabes et puerpéralité.) Gaussel-Ziegelmann.

72. **The Limit of Assimilation of Sugar in Uncontrollable Vomiting of Pregnancy.**—Lequeux calls attention to the important information to be derived from digestive *glycosuria e saccharo* for estimation of the gravity of the condition in uncontrollable vomiting of pregnancy. Pinard has recently declared that the pulse is the infallible index of the condition, regarding a pulse of over 100 as an indication for immediate interruption of the pregnancy. But he has encountered one case at least with fatal coma with a pulse not over 80, and Lequeux here reports three cases in which the pulse was never high although the condition was extremely serious. He tested the power of assimilation for sugar and found that it was materially lowered in these severe cases; it paralleled the general condition so closely that he is convinced that the glycolytic power is the most reliable index of the condition of the liver and hence of the approach of danger. He gives the patients from 20 to 50 gm. of cane sugar and his experience has shown that when the power of assimilation is below 1 gm. per kilogram of body weight, the prognosis is very grave and the pregnancy should be terminated at once. The lower glycolytic power may persist for some time, indicating that the woman should be regarded as having pronounced liver trouble and should be treated accordingly until conditions return to normal.

75. **Tabes and Pregnancy.**—The history of tabes in connection with childbirth shows that the chances are all in favor of the delivery and puerperium being normal. The mother does not seem to incur any special danger from the coexistence of the tabes, and the children are viable and healthy in a large proportion of the cases. In a series of 68 cases on record of pregnancy in the course of tabes, two-thirds of the 27 children were living at last accounts and one-third of the 41 children of mothers whose tabes developed after the onset of the pregnancy. The tabes itself does not seem to affect the children; the relatively high mortality is due to the preexisting syphilis. Delivery is liable to be exceptionally brief on account of the lack of tone in the muscles, but otherwise the obstetrician should deal with the tabetic as with the healthy parturient. If the syphilis is of recent date or there is a history of preceding abortions, mercurial treatment during pregnancy is indicated on behalf of the child.

Presse Médicale, Paris

May 21, XVIII, No. 41, pp. 377-392

76 Median Reenforcement of Abdominal Suture. (Cicatrices discontinues et renforcement médian dans les laparotomies longitudinales médianes.) L. Chevrier.

77 The Virus of Acute Epidemic Poliomyelitis. C. Levaditi.

78 Colon Bacillus Septicemia. (Etude des septicémies colibacillaires.) H. De Bessé.

79 *The Gases in Stomach Disturbances and Treatment Based Thereon. (Recherches sur les gaz de l'estomac.) M. Hulmann.

May 25, No. 42, pp. 393-400

80 Serotherapy of Anthrax. (La sérothérapie anticharbonneuse.) L. Boldin.

81 Repose and Exercise in Treatment of Pulmonary Tuberculosis. A. Martinet.

79. **Gases in Treatment of Gastric Disturbances.**—Hulmann has been studying the gases generated in the stomach in the course of digestion, for which he has devised a simple apparatus, using a branching Faucher tube. In treatment of pathologic conditions he utilized the information thus derived, injecting a mixture of air and carbon dioxid in two patients with acid dyspepsia, air and oxygen in a patient with glandular atony, pure nitrogen in a case of nervous atony and pure oxygen in a case of dilatation of the stomach and autointoxication. The results he regards as encouraging, and he is now experimenting to learn whether injection of some gas before meals may not be able to stimulate the gastric secretions and promote digestion. Mere evacuation of the gases generated in the stomach gave great relief in three other cases.

Revue de Gynécologie, Paris

May, XIV, No. 5, pp. 417-512

82 Modifications in the Hymen from Diseases of the Genital Apparatus. F. Jayle.

83 Results of Various Operations done for Ileocecal and Appendiceal Tuberculosis in 469 Cases on Record. P. Alglave.

Semaine Médicale, Paris

June 1, XXX, No. 22, pp. 253-264

84 *Estimation of Gastric Acidity by Effervescence on Ingestion of an Alkali. (Une nouvelle méthode d'examen fonctionnel de l'estomac.) E. Fuld.

84. **Estimation of Gastric Acidity by Effervescence on Ingestion of an Alkali.**—Fuld has the patient drink a solution of sodium bicarbonate and then applies the stethoscope to the stomach and estimates the amount of hydrochloric acid present by ausculting the effervescence that follows the contact of the alkali with the acid medium of the stomach content. When the formation of bubbles can no longer be heard, percussion will reveal the amount of gas generated and radioscopy will confirm the degree of distention of the stomach. The acid naturally in the stomach takes the place of the tartaric acid

used for the usual effervescence inflation test. He declares that when it is impossible to withdraw the stomach content for direct inspection, this sodium bicarbonate test is superior to all other measures on account of its simplicity, ease and precision, this intragastric acidimetry by saturation, corresponding to titrametry in chemistry, permitting the determination of the total amount of free acid in the stomach at a given moment. The degree of concentration is expressed by the rapidity with which the phenomena of crepitation occur. He adds that if in the normal stomach one hour after a test meal the stomach content may be assumed to average 250 c.c. with a free acidity of 30, the neutralizing dose of sodium bicarbonate would be 0.63 gm. and the carbon dioxid generated would amount to 0.33 gm. which would fill a space of 187 c.c. After cessation of the effervescence following ingestion of this dose, if a new dose is ingested and effervescence follows anew, this shows, he says, that there is an excess of acid present. In conclusion he remarks that the special value of this test may prove to be in revealing anachlorhydria, pointing to gastric cancer.

Berliner klinische Wochenschrift

May 16, XLVII, No. 20, pp. 913-956

85 Historical Address at Bicentennial of Berlin Charité Hospital. O. Schelbe.
86 Clinical Methods and Instruction in the Past and Present. (Klinischer Betrieb und klinischer Unterricht einst und jetzt.) F. Kraus.
87 *Serotherapy plus Vaccine Therapy in Treatment of Scarlet Fever. (Neuere Gesichtspunkte der Scharlachbehandlung.) G. Jochmann and G. Michaelis.
88 Operative Cure of Cortical Epilepsy. (Fall von operativ behandelter Rindenepilepsie.) A. Franz.
89 Sensitized Tubercle Bacilli Emulsion. (Tuberkulose-Sero-Vaccin.) F. Meyer.
90 Free Hemolytic Fat Acids in the Liver with Acute Yellow Atrophy and Phosphorus Poisoning. (Ueber hämolytisch wirkende, freie Fettsäuren in der Leber bei akuter gelber Atrophie und Phosphorvergiftung.) G. Joannovics and E. P. Pick.
91 Comparative Experimental Research on Retention of Kissingen Mineral Waters in the Stomach. (Verweildauer der Kissinger Mineralwässer im Vergleich zu anderen Flüssigkeiten im Magen.) F. Meyer.
92 Nursing and Therapy: Importance of Training Medical Students in the Care of the Sick. (Bedeutung der Krankenpflege für die Therapie.) R. Salzwedel.

87. Treatment of Scarlet Fever.—Although the streptococcus is not regarded as the causal agent of scarlet fever, yet its cooperation is what seems to make the disease so murderous, according to the opinion of Jochmann and Michaelis. They have obtained good results in treatment by combining anti-streptococcus serum with vaccine therapy; neither alone gave such good results. The method was applied only in the severer cases; that is, in 52 out of 400; 14 of the patients died and 38 recovered, all without complications of any kind. The absence of nephritis they regard as more than a mere coincidence. In their previous experience scarcely any of the patients recovered from whose blood during life streptococci could be cultivated, but among those who recovered under the combined treatment there were a number in this category.

Deutsche medizinische Wochenschrift, Berlin

May 19, XXXVI, No. 20, pp. 921-968

93 *Treatment of Pericarditis. N. Ortner.
94 *Puncture of the Brain. (Zur Hirnpunktion.) K. Pollack.
95 Origin of Cirrhosis of the Liver. (Zur Genese der Leberzirrhose.) O. Warschauer.
96 *Diabetes Mellitus. (Diätregelung und Heilung bei Diabetes mellitus.) A. Lenné.
97 Determination of Tubercle Bacilli when they are very Scanty. (Nachweis sehr spärlicher Mengen von Tuberkelbazillen.) T. Huzella.
98 Simplified India-Ink Technic for Determination of Spirochetes. (Nachweis der Spirochaeta pallida durch ein vereinfachtes Tuschverfahren.) J. Berg.
99 Three Cases of Hemoglobinuric Nephritis with Pneumonia. W. Doevenspeck.
100 Bilharzia Disease of the Bladder. F. R. W. Frank.
101 Diagnosis and Treatment of Bladder Stones in Children. (Blasensteine beim Kinde.) G. Berg.
102 Parenchymatous Keratitis a Genuine Syphilitic Disease. J. Igersheimer.
103 To Prevent the Hair from Falling Out: Keep the Scalp Clean. (Zur Verhütung des Haarausfalls.) E. Kromayer.

93. Treatment of Pericarditis.—Ortner emphasizes the importance of a history of syphilis or rheumatism as a guide to treatment; the salicylates rarely prove effectual in rheumatic pericarditis but they should always be given a trial. He remarks that pericarditis may occur in an encapsulated form; there may even be multiple encapsulated foci; some serous, others with purulent contents. Absolute repose should be continued until the last trace of effusion and of friction sounds has vanished and the heart action is entirely normal. In case of local disturbances he applies cold in the form of an ice bag suspended over the heart, or heat from hot compresses; the latter aid in relieving pain while they have an unmistakable curative action and strengthen the heart. Dry cupping may also prove useful; morphin, he continues, should be given without hesitation in case of excessive pain and restlessness. When there is a concomitant pleural effusion he taps the latter first as this may make it unnecessary to tap the pericardium. The latter measure, however, may render important service even with a purely hemorrhagic pericardial effusion; in two recent cases of hemorrhagic effusion with pericarditis, accompanying scorbutus, the puncture proved a life-saving measure. It should be made only in the side regions of the pericardium.

94. Puncture of the Brain.—Pollack comments on the diagnostic and therapeutic importance of puncture of the brain, not only for acquired hydrocephalus but for cysts and effusions in the meninges or brain, dural hematomas and abscesses in the brain. In a number of cases reported in detail of hydrocephalus, circumscribed meningeal effusions, uncomplicated cysts and dural hematomas the result was a definite cure. The best technic is puncture of the scalp, a small hole bored in the skull with a fine blunt smooth drill and introduction of a fine hollow needle attached to a Pravaz syringe. Larger sized instruments are liable to injure vessels which the fine ones push to one side. Among the instructive cases described in detail is one of an assumed abscess in the brain of a girl of 17; puncture of the right frontal lobe gave issue to 18 c.c. of fluid and a little normal brain tissue, after which the intense headache subsided. A week later the left cerebellum was punctured and fluid spurted, about 60 c.c. being evacuated this time, followed by entire recovery. Neither in this nor in some similar cases were there any pathologic findings in the fundus of the eye or other signs of hydrocephalus. Acute or subacute hydrocephalus in adults is frequently diagnosed as migraine, and a rapidly fatal termination may be averted by prompt puncture, as also in cases of a superficial local intracranial collection of fluid. He adds that especially in the diagnosis and treatment of extradural and intradural hematomas puncture has rendered most valuable service. In some of these cases the limpid fluid found showed that the bleeding had entirely stopped, and the patients recovered at once after escape of the fluid. The most instructive sign in such cases is the violent circumscribed pain experienced at the site of the old trauma when the region is struck; the puncture shows that the trouble is a serous effusion at the site of the injury. In the last case described a young man of a hysteric-neuropathic temperament had a frontal sinusitis after scarlet fever, which healed on evacuation of the focus. Symptoms developed later suggesting possible hysteria or an intracranial process, the former being finally accepted. Puncture however brought pus.

96. Diabetes Mellitus.—Lenné declares that the diet should be individualized for the patient and the special phase of the disease more than is generally done. It has been his experience that the way in which the carbohydrates are prepared for the table is of the greatest importance for their tolerance by the diabetic. They are tolerated best in the form which takes the longest time for their absorption and which passes most slowly into the blood, such as coarse, tough, moist bread rather than fine, dry and toasted bread, Saratoga potatoes instead of soft mashed potato, etc. The behavior of the albumin metabolism is the criterion of the severity of the case and of the permanence of recovery. It is possible, he says, to conceive of a functional diabetes in which the centers regulating carbohydrate metabolism do not functionate normally because the internal secretions of the organs involved do not reach them physiologically, owing to lack of development of the organs or to toxic influences or other causes. As the young organism grows into harmonious physiologic proportions, things right themselves. This assumption would explain Hürter's case of apparently complete recovery from severe

diabetes in a girl of 10. Lenné also reports a case of apparently complete cure of a young man of 20 who two years ago presented severe acetonuria and other symptoms of grave diabetes, so that the prognosis was regarded as distinctly unfavorable. What no medical measures had been able to accomplish was realized naturally, probably, by the further development of the organs or centers or both involved.

Fortschritte der Medizin, Leipsic

April 28, XXVIII, No. 17, pp. 513-544

104 Etiology, Localization and Early Diagnosis of Apical Tuberculosis. (Entstehung, Lokalisation und frühzeitige Erkennung der Lungenspitzentuberkulose.) H. Beschorner. Commenced in No. 16.

May 12, No. 19, pp. 577-608

105 *Tuberculosis and Chlorosis. G. Zickgraf.
106 Modern Treatment of Gastrointestinal Disease. (Die moderne Therapie der Magen-Darmkrankheiten.) I. Lipowski. Commenced in No. 18.

105. Tuberculosis in relation to Chlorosis.—Zickgraf makes a practice of applying the tuberculin test in every case of persisting chlorosis, and states that a positive response was obtained in 74.8 per cent. of 55 cases in which there was nothing otherwise to suggest the existence of tuberculosis. This finding confirms his assumption that tuberculosis is responsible for the chlorosis in a surprisingly large number of cases. The reaction was obtained with 5 mg. or less in all but 5 of the patients. In 48 other cases the chlorosis accompanied manifest signs of tuberculosis. In the tuberculous cases in which the chlorosis was the first or one of the first manifestations of the infection, the patients reacted to the tuberculin test with smaller dosage and in a larger percentage than the rest of the tuberculosis suspects, and the percentage of negative responses was less. Sanatorium treatment was indicated for only 56.9 per cent. of the whole number of suspects while it was indicated for 70.7 per cent. of the whole number of chlorotics with or without suspicion of existing tuberculous infection. The general practitioner, he remarks, should examine the lungs with particular care in every case of chlorosis, and if the chlorosis proves refractory to the usual measures he should not hesitate to apply the tuberculin test as tuberculosis may be lurking beneath.

Jahrbuch für Kinderheilkunde, Berlin

May, LXXI, No. 5, pp. 535-650

107 *"Albumin Milk" in Infant Feeding. (Ueber "Eiweissmilch." Ein Beitrag zum Problem der künstlichen Ernährung.) H. Finkelstein and L. F. Meyer.
108 Study of Epidemic of Rubeola. (Röteln.) O. Schey.
109 Relations of Cretinism with Myxedema and Cachexia Strumipriva. (Familiärer Kretinismus in Wien.) R. Ellar.
110 Study of the Metabolism During the First Two Weeks in Infants Born at Term or Before. (Beitrag zur Kenntnis der Stoffwechselvorgänge in den ersten vierzehn Lebenstagen normaler und frühgeborener Säuglinge.) L. Langstein and A. Niemann.

107. Sugar-Poor Mixture for Infant Feeding.—Finkelstein is convinced that serious disturbances are kept up in sick infants by the fermentation and acids generated by even small amounts of milk sugar in the food. When the food is given entirely free from sugar, "fat diarrhea" stops at once, showing that the latter is not primary. Measures to prevent and cure dyspeptic fermentations should include reduction of the amount of sugar in the food and dilution of the salts, with increased proportions of casein and fat, and, as the child improves, larger amounts of easily assimilable carbohydrates. These requirements he meets with a food made by coagulating a liter of whole milk with a little liquid rennet, keeping the milk for 30 minutes at a temperature of 42 C. in the water bath, and then pouring the whole into a linen bag hung up to drip for an hour. The clotted casein is then stirred into a half liter of water and the whole worked through a hair sieve twice at least. The mixture then looks like milk; a half liter of buttermilk is then stirred into it. Buttermilk answers the purpose on account of the small content in milk sugar, the stimulating action of the lactic acid and the comparative durability of the mixture thus prepared. He calls it *Eiweissmilch*, albumin milk, and states that it contains 3 per cent. albumin; 2.5 per cent. fat; 1.5 per cent. sugar and 0.5 per cent. ash; the proportion of ash is thus higher than in ordinary cow's milk, the artificial clotting increasing the amount naturally retained in the clot. The benefit from this food is emphasized as observed in various gastrointestinal disorders, the groups being classified and analyzed in turn. The article is continued.

Medizinische Klinik, Berlin

May 15, VI, No. 20, pp. 771-810

111 Operative Treatment of Ptosis of the Eyelids. A. Elschnig.
112 *Etiology of Eclampsia. A. Bauereisen.
113 *Transplantation of Glands. (Transplantation und Epithelkörperchen.) W. Danielsen and F. Landois. Commenced in No. 19.
114 Localization of Incipient Pulmonary Tuberculosis in the Röentgen Picture. H. Grau.
115 *The Salt-Poor Diet. (Zur Praxis der kochsalzarmen Ernährung.) J. Leva.
116 The Nitroprussid Reaction in the Urine. (Ueber die Arnoldsche Reaktion.) E. Herzfeld and X. Buss.
117 *Experiences with Douche-Massage in Treatment of Brain and Spinal Cord Disease. (Erfahrungen mit kombinierter Duschemassage bei Gehirn- und Rückenmarkserkrankungen.) R. Schuster.
118 Tuberculin Treatment of Chronic Tuberculosis in the Rabbit. (Behandlung der chronischen Tuberkulose des Kaninchens mit Alttuberkulin.) R. Stumpf.

112. Eclampsia.—Bauereisen reviews the various theories that have been advanced to explain eclampsia, all sustaining the assumption that the disease is the result of an intoxication from disturbances of the metabolism in consequence of the pregnancy. He advises frequent examination of the urine and regulation of the diet if kidney troubles threaten, with considerable reliance on vegetable alkalies. After the onset, delivery can be hastened and the poison got rid of by venesection, promotion of kidney and skin functioning and intake of alkaline fluids. Narcotics should be avoided, he says, as they reduce the oxidizing power of the cells and do direct harm to vital organs. If all these measures fail, decapsulation of the kidney is in order. Experience to date has shown that treatment along these lines is successful and the results are better, the earlier it is instituted. The exact nature of the toxin may be still a mystery, but the struggle against the disease is no longer hopeless.

113. Transplantation of Glands.—Danielsen and Landois conclude this long study of what has been accomplished to date in transplanting glandular organs by stating that the results are very meager in comparison to the expectations and the labor expended. Experience has shown that the results are poorer the more highly organized the tissue transplanted. This applies especially to brain and spinal cord tissue and to the suprarenals. In contrast to these are the good results with purely epithelial glands like the mamma, ovaries, thyroid and parathyroids. The transplantation of ovaries and parathyroids has given especially fine results, but each advance in these lines opens up new problems for solution. Further research is urgently needed, they remark, on the functioning of the thymus, the hypophysis and the suprarenals.

115. Salt-poor Diet.—Leva recapitulates the findings of his recent research on the salt content of various foods, based on 360 analyses. He then discusses the menus that can be made up from the foods containing naturally only small amounts of salt, declaring that custom is responsible for our eating so much salt, and that no harm results from abstention; many primitive races take no salt at all. Meat is the one article that seems to require more salt to render it palatable, especially beef, veal and pork, soups and meat extracts. The bread should be made without salt and vegetables avoided that contain a large proportion, such as celery, spinach and cauliflower. But other vegetables, cereals, beverages, unsalted butter and cream, eggs, etc., form a liberal diet. Canned goods should be excluded as they usually contain a considerable amount of salt, as also mineral table waters. He adds that horseradish, mixed pickles or mustard can disguise the lack of salt.

117. Douche-Massage in Brain and Spinal Cord Disease.—Schuster has the massage applied with one hand while the other plays the douche on the patient. This method of applying the Aachen thermal waters has been found to be especially useful in chronic myelitis, tabes and cerebral syphilis, spinal and progressive paralysis as well as in rheumatism and neurasthenia. With two exceptions all the patients were benefited.

Münchener medizinische Wochenschrift

May 17, LVII, No. 20, pp. 1057-1104

119 *Treatment of Post-Partum Hemorrhage. (Zur Therapie der Nachgeburtsblutungen.) F. Weber.
120 Nature and Mode of Distribution of Virus of Epidemic Poliomyelitis. (Zur Natur und Verbreitungsweise des Poliomyelitisvirus.) P. H. Römer and K. Joseph.
121 *Tuberculous Meningitis. O. Fischer.
122 *Explanation of Briefly Transient Cerebral Hemiplegia. G. Riebold.
123 Technic for Differentiation of Iodin, Indican and Skatol with the Jaffé Indican Reaction. B. Spiethoff.
124 *Cosmetic and Therapeutic Application of Paraffin in Rhinology. M. Wassermann.
125 Vacuum Bottles as Aid in Bacteriologic and Serologic Work. (Verwendung von Thermosgefässen zu bakteriologischen und serologischen Arbeiten.) F. Sommerfeld.

119. **Treatment of Post-Partum Hemorrhage.**—Weber analyzes the experiences at the university women's clinic at Munich in charge of Döderlein, a total of 508 cases of atony of the uterus in the course of nine years among 14,273 parturients. The Momburg belt constriction was applied in 11 cases in which the hemorrhage continued with retained placenta. The clinical picture changed at once after the rubber tube had been wound around the waist; the bleeding stopped at once, the uterus became like stone and the placenta was expelled in less than 15 minutes without further hemorrhage. Equally favorable results were obtained in 32 other cases in which the atony developed after expulsion of the placenta. In 4 other cases the belt constriction permitted separation of the placenta with the hand without loss of blood, and in 15 cases it much facilitated suture of bleeding tears in the cervix. In 5 other cases the constriction was applied until the femoral pulse became imperceptible and yet the hemorrhage continued, so that uterovaginal tamponing, according to Dührssen, had to be applied; possibly in these cases the stomach and intestine had been too full for successful constriction or the aorta may have slipped aside.

121. **Tuberculous Meningitis.**—Fischer discusses the experiences at the Leipsic university clinic with 260 cases of tuberculous meningitis during the last 20 years; all the patients except 33 were adults. Headache and depression were the first symptoms, sometimes with diarrhea, sometimes with chills; in about 10 per cent. the acute phase developed suddenly. Retention of urine was almost constant; rigidity of the neck was rare and Kernig's sign was often absent. An alternation of clonic and tonic spasms was sometimes observed. In some of the cases the temperature was extremely low, lower than in any other conditions, except freezing. In 7 cases the disease proved fatal in less than a week after the first prodrome; in others it lasted for months. The clinical picture suggested typhoid in some, senile dementia or apoplexy, myelitis, epilepsy or psychosis in others. None of the patients recovered but the subjective symptoms were much improved by lumbar puncture in 25; in one case the distended bladder was involuntarily voided immediately after the lumbar puncture, which throws light on the causes of the retention of urine. In another case a man of 44 presented all the typical symptoms of meningitis but the brain was apparently normal at autopsy, the lesions found being only extensive processes in the lungs and intestines.

122. **Transient Cerebral Hemiplegias.**—Riebold concludes from study of 2 or 3 cases that mechanical obstruction of the blood supply of the brain may occur from some slight local affection of some vessel in the brain, but that a compensating blood supply soon develops, rapidly dispelling the resulting symptoms. Even with embolism or thrombosis of minute vessels the development of a collateral route may rapidly relieve the results of the obstruction. His cases suggest the possibility that an anastomosis may develop between the branches of the precerebral artery, after which severe cerebral hemiplegia from obstruction of the main trunk of an artery may rapidly retrogress.

124. **Paraffin in Rhinology.**—Wassermann gives illustrations of the fine results of injection of cold paraffin to correct saddle nose, the patients having been under observation for nine years. In 30 other cases he applied the injection in treatment of ozena. In 10 of these cases two years have passed and the excellent results have persisted. This method of treatment of ozena by injection of paraffin under the mucosa is indicated only when the mucosa is comparatively stout; if extremely atrophied it is unable to retain the paraffin.

Therapie der Gegenwart, Berlin

May, LI, No. 5, pp. 193-240

126 *Heart Irregularities During Childhood and Puberty. (Herzstörungen im Kindes- und Pubertätsalter.) C. Hirsch.
127 Medical Reprints and the Advertising of Proprietaries. (Ueber Reklame durch Sonderdrücke.) G. Klemperer.

126. **Heart Irregularities in the Young.**—Hirsch has found comparative hypertrophy of the artery walls not an uncommon discovery in older children and at puberty but the blood pressure with it is not materially increased, although there may be palpitations and a sense of oppression in the chest. The cause is a "growth hypertrophy" as a rule, although excessive masturbation may induce a similar syndrome. The lack of dilatation of the heart, of murmurs, the normal size of the liver, the good health otherwise and absence of aggravation of the symptoms by physical exercise render an organic lesion improbable. Children are particularly prone to arrhythmia on the slightest excuse, and the harmless arrhythmia is distinguished by the full and powerful pulse beat; the diastole alone varies in length. This form of arrhythmia also subsides if the heart action becomes accelerated, as then the abnormally long diastoles are shortened. This infantile type of harmless arrhythmia may persist beyond puberty and give grounds for alarm if casually discovered first in a young pregnant woman. Arrhythmia due to actual organic disease is generally the result of extrasystoles. Extrasystoles may be accepted as suspicious of a genuine organic heart lesion; at the same time they may occur solely from some nervous affection and may even be the first manifestation of an organic nervous disease. No one to date has succeeded, he says, in inducing extrasystoles by irritation of the heart nerves. The arrhythmia in tuberculous meningitis is of the infantile type; that is, it seems to be due exclusively to diastoles of varying length. Heart murmurs may also be observed without organic lesions, he adds; Lüthje found systolic murmurs in 623 out of 854 children examined, but only 2 per cent. of the total number had certain signs of valvular disease. Beyer detected a systolic murmur in 352 of 830 school children examined, most frequently in girls. In 253 cases the murmur was audible during repose; in the others only after gymnastic exercises. The murmurs did not parallel findings of anemia and in only 14 cases were concomitant signs of a heart defect to be detected. Hirsch explains these accidental murmurs as due merely to certain physiologic and anatomic peculiarities of the circulation in children, differing possibly in the various cases, such as a more rapid flow of blood in the anemic, or a slight, transient, muscular mitral insufficiency.

Wiener klinische Wochenschrift, Vienna

May 19, XXIII, No. 20, pp. 723-762

128 *Indications for and Results of Tuberculin Treatment of Tuberculosis in Children. T. Escherich.
129 Pyloric Insufficiency and Flora with Gastric Achylia. (Pylorusinsuffizienz und Kolliflora im Magen bei Achylia gastrica.) R. Fleckseder.
130 Topography of the Fat Metabolism. (Ueber den Weg der Fettelichen im Blute.) S. Bondi and A. Neumann.
131 Action of Mercury on the Wassermann Reaction? (Hat das Sublimat eine Wirkung auf die Wassermannsche Reaktion?) G. Tatta and A. Donati.

128. **Tuberculin Treatment of Children.**—Escherich gives an extensive description of the mode of action of tuberculin in treatment of tuberculosis in children and adults and his experience with it in a large number of cases in children under 14. The conditions are different, he remarks, in children and in adults; in the former the more intense skin reaction shows a capacity for more active production of anaphylaxin. In adults the main feature of tuberculin treatment is the production of antibodies similar to the curative process in diphtheria. In children the aim is to increase the anaphylactic body and the accompanying focal reaction, imitating in this way the process of spontaneous healing in children. He calls the first the "immunizing" and the other the "anaphylizing" method. The latter is especially indicated for ailing, pale children, with languid appetite, slight tendency to fever at times and night sweats, possibly enlarged glands in the neck

and a slight tendency to changes in the dulness over the lung and breathing sounds, explained by the Roentgen rays as the result of enlarged bronchial glands or a thickening in the hilus. These children have a latent tuberculous infection located in the bronchial glands, and the toxic action from it is evident throughout. Iron and arsenic seem to do no good but injection of minute doses of tuberculin at considerable intervals seems to rouse the tissues from their torpid condition and stimulate rapid repair. The children feel better in a week or two, the appetite returns and the tendency to fever and night sweats subsides, while the physical changes cease to be manifest in the course of two or three months. The production of toxin from the latent focus is paralyzed or overcompensated by the protecting substance of the organism (anaphylaxin). The substance provided by the small amount of tuberculin stimulates the production of anaphylaxin, and the natural healing process is given a powerful impetus. These courses of minute amounts should be repeated from time to time. This method of treatment has not only a curative but a prophylactic action against recurrences later. It requires the child to be in a relatively good condition as it depends for its success on the reacting power of the organism. It should be supplemented with the usual general measures for tuberculosis, but is proving useful even for ambulant treatment in an unfavorable environment.

Zentralblatt für Chirurgie, Leipsic

May 21, XXXVII, No. 21, pp. 737-768

132 *Iodin in Sterilization of the Skin. (Zu meinem Desinfektionsverfahren der Haut des Operationsfeldes mittels Jodtinktur.) A. Grossich.
133 *Prophylactic Hemostasis. (Die prophylaktische Blutstillung bei Operationen.) R. von den Velden.
134 *Utilizing the Appendix Stump to Stimulate Peristalsis. (Die Anregung der Peristaltik nach Laparotomie wegen Appendicitis mit freier Peritonitis.) R. Lampe.

132. Iodin Sterilization of the Skin.—Grossich remarks that his and others' experience with tincture of iodin in thousands of cases has confirmed the efficacy of this method of treating accidental wounds and for surgical sterilization. All attempts to modify it have only needlessly complicated the technic. He always uses the official (Italian) 10 per cent. tincture and is now preparing a monograph on the subject and urges those who are using his method to let him know their results.

133. Prophylactic Hemostasis at Operations.—Salt taken by the mouth or injected into a vein disturbs the osmotic balance between the blood and the tissues, and the result is that thrombokinase is washed out into the vascular system, thus increasing the coagulating property of the blood for the time being. This fact is utilized by von den Velden to prevent hemorrhage, his clinical and experimental experience confirming the efficacy of intravenous infusion of 3 or 5 c.c. of a 5 per cent. salt solution, as increasing materially the coagulating power for from 30 to 50 minutes. He has applied this measure during the last two years in the clinic with the best results before operations in which parenchymatous hemorrhage is feared or when the blood coagulates less readily than normal. He advises this measure in prophylaxis or during the operation, repeating it every half hour as needed, its absolute harmlessness having been abundantly established.

134. Utilizing the Appendix Stump to Stimulate Peristalsis.—Lampe severs the appendix and then inserts a catheter into the stump fastening it to form a Witzel fistula and injecting water into the intestine through it. He has found that this stimulates the peristalsis better than any other means he has ever tried, and the fistula heals readily when no longer needed.

Zentralblatt für Gynäkologie, Leipsic

May 21, XXXIV, No. 21, pp. 689-720

135 Physiology and Pathology of the Puerperium. F. Ahlfeld.
136 The Transverse Pfannenstiel Incision Gives as Good Results as Other Technics in the Non-Aseptic Obstetric Cases. (Ist der suprasymphysäre Fascienquerschnitt nach Pfannenstiel für vermutlich nicht aseptische Operationen geeignet?) R. Klotz.
137 *Importance of Isolated Local Anesthesia of the Pudendal Nerve in Operations on Scrotum, Perineum and Anal Region. (Ueber Nervus pudendus-Anästhesie.) W. Ilmer.

137. Isolated Anesthesia of the Pudendal Nerve.—Ilmer states that operations on the scrotum, perineal and anal regions, as well as gynecologic operations, can be performed without pain under isolated local anesthesia of the pudendal nerve. He gives an illustration of the course of the nerve and the mode of access. The needle is inserted at the rear of the tuberosity of the ischium; the nerves pass along the posterior surface of the ischium below the sacroiliac ligament, consequently the needle must be pointed towards the sacrosciatic foramen. In 50 obstetric and gynecologic cases he used 1 c.c. of a 5 per cent. solution of cocain with 5 c.c. of salt solution, pushing the needle in quite deep. The method is especially useful for suture of tears in the perineum and cervix.

Gazzetta degli Ospedali e delle Cliniche, Milan

May 19, XXXI, No. 60, pp. 633-640

138 *Modern Treatment of Tetanus. G. Bongioannini.

May 22, No. 61, pp. 641-656

139 Physico-chemical Hypotheses in Regard to the Pharmacologic and Toxic Action of Alcohol. (Dell'alcool.) L. Sabbatani.
140 *General Anesthesia with Part of Circulation Shut Off. (Narcosi generale con circolo ridotto.) C. G. Berri.

138. Treatment of Tetanus.—Bongioannini advocates antitetanic serum supplemented by subcutaneous injection of 1 or 2 c.c. of a 2 or 3 per cent. solution of phenol—the Baccelli method. He adds that Baccelli's dosage has been doubled and tripled in some cases without harm resulting.

140. General Anesthesia with Part of Circulation Shut Off.—Berri reports 63 cases in which an Esmarch bandage was applied to the legs or arms or both to exclude these members from the general circulation. The amount of chloroform necessary for major operations thereafter was much less than with other technics, thus lessening materially the toxic action of the anesthetic. The first phase of anesthesia was shortened, the nerve centers feeling the effect of the anesthetic remarkably early, and the patients rousing afterward much quicker. No by-effects were observed. In one case there was paralysis of one limb afterward but this happened to be in a limb to which the constriction had not been applied.

Policlinico, Rome

May 15, XVII, No. 20, pp. 641-672

141 Polycythemia with Enlargement of the Spleen and Cyanosis. (Poliglobulia con splenomegalia e cianosi.) T. Sandesky.
142 Pellagra Ascribed to Parasite in Drinking Water. (Nuove ricerche sulla etiologia della pellagra.) G. Alessandrini.

May, Medical Section, No. 5, pp. 193-240

143 Pathologic Anatomy of Myasthenia Gravis. A. Nazari.
144 Respiratory Mechanics of Pneumothorax. S. La Franca and U. Campese.
145 Isolation of the Cholera Germ. (Sull'isolamento del vibrione colerico.) M. Pergola.
146 Influence of Allen Aggressins on Experimental Malta Fever. (Influenza di alcune aggressine eterologhe sulla infezione sperimentale da micrococco di Bruce.) S. Maggiore.

Riforma Medica, Naples

May 9, XXVI, No. 19, pp. 505-532

147 *Intermittent Pneumonia. (Sulla polmonite intermittente.) R. Ciauri.
148 Kala-Azar in Italy. A. Visentini.
149 *Joint Disease in Tabes. (Sulle artropatie tabetiche.) E. Cedrangolo.

May 16, No. 20, pp. 533-560

150 Present Status of Treatment of Pulmonary Tuberculosis by Artificially Induced Pneumothorax. (Terapia pneumotoracica nella tisi polmonare.) C. Forlanini.
151 Chemotherapy in Protozoan Diseases. (Dove s'indovano i tripanosomi nel periodo di latenza dell' infezione sperimentale.) G. Fusco.
152 Constriction Hyperemia in Therapeutics. (L'iperemia da stasi come metodo di cura.) C. Salvetti.

147. Intermittent Pneumonia.—A young man developed pneumonia but the temperature curve was of the quotidian malarial type, the fever subsiding to normal for 12 hours in the intervals.

149. Tabetic Joint Disturbances.—In Cedrangolo's five cases the course of the joint affection was acute, slow or chronic; the knee was the seat of the trouble in every instance—both knees in one case. These tabetic arthropathies are seldom accompanied by pain or local redness; the absence of pain when the leg is twisted is an important differentiating sign of the tabetic origin. The joint swells and there is more or less effusion, the process being an osteoarthritis liable to involve all the tissues of the joint and vicinity. Mercurial treatment seemed to benefit in some cases but aggravated the symptoms in others.

Norsk Magazin for Lægevidenskaben, Christiania

May, LXXI, No. 5, pp. 449-568

153 *Action of Electric Current on Human Body and its Importance for Accident Insurance and Forensic Medicine. (Om indvirkningen af elektrisk strøm paa det menneskelige legeme og betydningen heraf i ulykkesforsikringen og i retsmedicinen.) F. Harbitz.

154 Action of Exlusive Meat Diet, Especially on the Thyroid. (Om virkningen af ensidig kjødernæring, særlig paa glandula thyreoidea.) A. Tanberg.

155 Circular Suture of Brachial Artery. H. Wille.

153. **Action of the Electric Current on the Human Body.**—Harbitz discusses 18 cases from his own experience and the factors which determine the outcome. Experience has shown a remarkable difference in the resistance of different individuals to the same current. A workman was killed instantly with a current of 2 amperes and 220 volts, but some others recovered after from 5,000 to 16,000 volts. In one a current of 7,000 volts apparently passed through the head and spine and after unconsciousness for two hours there was acute mania for three hours which then subsided suddenly and completely with no lesions of consequence. In another case a man of 43 came in contact with a current of 30 amperes and 12,000 volts. After a few minutes of unconsciousness, he was able to get up alone, but his right arm was helpless for a time and there were burns on both arms and one leg, and occasional slight pains in the legs for a few months. In another case the head came in contact with a current of 16,000 volts and was much burned and cataract developed later. It is possible that in this case the current did not pass through but merely skipped, with production of a spark, the latter doing the damage. The resistance offered by the skin is great, especially in the palm or sole of the foot, while thin, delicate skin has less resisting power and mucous membranes still less. The resistance is less also if the skin is moist, especially with sweat, or from damp shoes and stockings. Predisposition is of importance. Young people of the lymphatic temperament seem to be especially liable to sudden death in electric accidents; next in order come hard drinkers and persons with heart disease; in one of his cases the electric accident seems to have aggravated an already existing vascular affection. Different species of animals show great difference in their susceptibility, the horse succumbing to a weak current, 400 or 500 volts, while a rabbit may survive the passage of 1,000 volts and the frog 10,000. The autopsy findings in Harbitz's cases are reported in detail. An electric accident is especially dangerous when the chest and heart are involved but the head seems to be less susceptible. Some advise venesection in cases of cyanosis, others advise against it on account of the danger of lowering the blood pressure. Jellinek has recommended lumbar puncture. Massage or regular elastic pressure on the heart may arouse it to spontaneous contraction, supplemented by stimulants and revulsion. These measures for resuscitation should not be abandoned for several hours. Prévost revived dogs by massage of the heart after two hours of apparent death. Schumacher advises in the most desperate cases tracheotomy and massage of the heart for two hours, supplemented, as a last resort, by sending a current of not less than 240 volts through the body, one electrode in the rectum, the other in a moist compress on the heart, applying the current for two or three seconds at a time. It is important to have the patients examined by an ophthalmologist later for detachment of the retina, atrophy of the optic nerve, etc. Tardy eye symptoms were observed by Jellinek in about one-half of his 122 cases of electric accidents (exclusive of 12 fatal cases).

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE EXAMINATION OF THE FUNCTION OF THE INTESTINES BY MEANS OF THE TEST DIET. Its Application in Medical Practice and Its Diagnostic and Therapeutic Value. By Dr. Adolf Schmidt, Halle, A.S. Authorized Translation from the Second Revised and Enlarged German Edition by Charles D. Aaron, M.D., Professor of Diseases of the Stomach and Intestines in the Detroit Post-Graduate School of Medicine. Price, $1.50 net. Cloth. Pp. 126, with illustrations. Philadelphia: F. A. Davis Co., 1909.

FOUNDERS' WEEK MEMORIAL VOLUME. Containing an Account of the Two Hundred and Twenty-fifth Anniversary of the Founding of the City of Philadelphia, and Histories of its Principal Scientific Institutions, Medical Colleges, Hospitals, etc. Edited by Frederick P. Henry, M.D. Cloth. Pp. 912, with illustrations. Published by the City of Philadelphia in Commemoration of the Two Hundred and Twenty-fifth Anniversary of its Founding. Philadelphia, 1909.

DIE PRAXIS DER HYDROTHERAPIE UND VERWANDTER HEILMETHODEN. Ein Lehrbuch fur Aerzte und Studierende. Von DR. A. Laqueur, leitendem Arzt der hydrotherapeutischen Anstalt und des medikomechanischen Institutes am stadtischen Rudolf-Virchow-Krankenhause zu Berlin. Price, 8 marks. Paper. Pp. 288, with 57 illustrations. Berlin: Julius Springer, 1910.

THE PRACTICE OF MIDWIFERY. Being the Seventh Edition of Dr. Galabin's Manual of Midwifery, Greatly Enlarged and Extended. By Alfred L. Galabin, Late Fellow of Trinity College, Cambridge, and George Blacker, M.D., Fellow of University College, London. Price, $6 net. Cloth. Pp. 1123, with 503 illustrations. New York: The Macmillan Company, 1910.

MANUAL OF TROPICAL MEDICINE. By Aldo Castellani, M.D., Director of the Clinique for Tropical Diseases, Ceylon, and Albert J. Chalmers, M.D., Registrar and Lecturer on Pathology and Animal Parasitology, Ceylon Medical College. University Series. Cloth. Price, $6 net. Pp. 1242, with 373 illustrations. New York: William Wood & Co., 1910.

PRINCIPLES OF SURGERY. By N. Senn, M.D., late Professor of Surgery, University of Chicago. Fourth Edition thoroughly revised by E. J. Senn, M.D., and E. Friend, M.D., Instructor in Surgery in Rush Medical College. Price, $5 net. Cloth. Pp. 706, with 231 illustrations. Philadelphia: F. A. Davis Co., 1909.

FIRST BIENNIAL REPORT, COMPRISING THE EIGHTEENTH AND NINETEENTH ANNUAL REPORTS OF THE TRUSTEES AND OFFICERS OF THE GROTO HOSPITAL FOR EPILEPTICS AT GALLIPOLIS. To the Governor of the State of Ohio. For the Biennial Period Ending Nov. 15, 1909. Paper. Pp. 119, with illustrations.

UEBER DIE NATUR UND DIE HERKUNFT DES TRACHOMERREGERS UND DIE BEI SEINER ENTSTEHUNG ZU BEOBACHTENDE ERSCHEINUNG DER MEHRUNG DES GONOKOKKUS NEISSER. Von Dr. Hans Herzog (Berlin). Paper. Price, 5 marks. Pp. 56, with illustrations. Vienna: Urban & Schwarzenberg, 1910.

PRACTICAL SUGGESTIONS IN BORDERLAND SURGERY. For the Use of Students and Practitioners. By Gustavus M. Blech, M.D., Professor of Clinical Surgery, Medical Department, Loyola University, Chicago. Price, $1.50. Cloth. Pp. 219. Philadelphia: Professional Publishing Co., 1910.

OPERATIVE SURGERY. For Students and Practitioners. By John J. McGrath, M.D., Professor of Operative Surgery at the New York Post-Graduate Medical School. Third Edition. Price, $5 net. Cloth. Pp. 653, with 265 illustrations. Philadelphia: F. A. Davis Co., 1909.

CHIRURGISCHE OPERATIONSLEHRE FÜR STUDIERENDE UND AERZTE. Von Dr. Friedrich Pels-Leusden, Oberarzt der Chirurgischen Universitätsklinik. Paper. Price, 18 marks. Pp. 728, with 668 illustrations. Vienna: Urban & Schwarzenberg, 1910.

CONGENITAL DISLOCATION OF THE HIP. By J. Jackson Clarke, F.R.C.S., Senior Surgeon to the Hampstead and North-West London Hospital. Cloth. Price, $1.50 net. Pp. 92, with 55 illustrations. New York: Paul B. Hoeber, 69 East 59th St., 1910.

ATLAS DER RECTALEN ENDOSKOPIE. Nebst einer Einführung in die Technik der Rectalen Endoskopie. Von Dr. Arthur Foges, Wien. Second Edition. Price, 14 marks. Paper. Pp. 102, with illustrations. Wien: Urban & Schwarzenberg, 1910.

HANDBOOK OF ELECTROTHERAPEUTICS. By William James Dugan, M.D., Lecturer on Electrotherapeutics at Jefferson Medical College, Philadelphia. Cloth. Price, $2 net. Pp. 242, with 91 illustrations. Philadelphia: F. A. Davis Company, 1910.

THERAPEUTISCHE TECHNIK FÜR DIE ÄRZTLICHE PRAXIS. Ein Handbuch für Aerzte und Studierende. Von Dr. Julius Schwalbe. Second Edition. Paper. Price, 22 marks. Pp. 979, with 537 illustrations. Leipzig: Georg Thieme, 1910.

A TEXT-BOOK OF PHYSIOLOGY. By Isaac Ott, M.D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia. Third Edition. Price, $3.50 net. Cloth. Pp. 891, with 393 illustrations. Philadelphia: F. A. Davis Co., 1909.

THE VEGETABLE PROTEINS. By Thomas B. Osborne, Ph.D., Research Chemist in the Connecticut Agricultural Experiment Station, New Haven. Price, $1.20 net. Cloth. Pp. 125. New York: Longmans, Green & Co., 1909.

TUBERCULOSIS WORK IN BUFFALO. What We Are Doing and What We Plan for the Future. Paper. Pp. 62, with illustrations. Buffalo Association for the Relief and Control of Tuberculosis, March, 1910.

MORTALITY STATISTICS, 1908. Department of Commerce and Labor, Bureau of the Census. E. Dana Durand, Director. Ninth Annual Report. Cloth. Pp. 705. Washington: Government Printing Office, 1910.

A SHORT HANDBOOK OF COSMETICS. By Dr. Max Joseph, Berlin. Third Edition. Authorized English Translation. Cloth. Price, $1. Pp. 86. New York: E. B. Treat & Co., 1910.

TWENTY-FIFTH ANNUAL REPORT OF THE DIRECTORS OF THE NEW YORK POST-GRADUATE HOSPITAL. For the Year Ending Oct. 1, 1909. Paper. Pp. 106, with illustrations.

TWENTIETH ANNUAL REPORT OF THE EYE, EAR, NOSE AND THROAT HOSPITAL OF NEW ORLEANS, LA. Jan. 1, 1909, to Dec. 31, 1909. Paper. Pp. 76, with illustrations.

TRANSACTIONS OF THE LUZERNE COUNTY MEDICAL SOCIETY. For the Year Ending Dec. 31, 1909. Volume XVII. Paper. Pp. 228. Wilkes-Barre, Pa., 1910.

TRANSACTIONS OF THE FLORIDA MEDICAL ASSOCIATION FOR THE YEAR 1910. Held at Jacksonville, Fla., April 6, 7 and 8, 1910. Paper. Pp. 204.

THE FORSAKEN. By Ivan Trepoff. Price, $1.10. Cloth. Pp. 179. New York: Cochrane Publishing Company, 1910.